

DRAFT

Campbelltown (Sustainable City) Development Control Plan 2015



VOLUME 2

Site Specific DCPs

DRAFT Part 8A: Menangle Park

Creating Campbelltown's Future 2025



Annotated Version

Changes made since public exhibition have been marked in:

Green for additions

~~Red for deletions~~

Colours will be changed back prior to publication.

Development Control Plan

Contents

1.	Application	6
1.1.	Name and Application of this Plan	6
1.2.	Projects Overview	7
1.3.	Compliance with the LEP	7
1.4.	Staging	9
1.5.	Relationship to other Planning Documents	11
1.6.	Development Applications	11
	Compliance with the Indicative Layout Plan	10
	Compliance with Objectives and Controls in this DCP	10
2.	Vision and Objectives	14
2.1.	Menangle Park Vision, Desired Future Character Statement and Principles	14
	Desired Future Character Statement	14
2.2.	The Indicative Layout Plan	15
3.	Environmental Management	19
3.1.	Riparian Corridors	19
3.2.	Flora and Fauna Conservation	21
3.3.	Bushfire Hazard Management	20
3.4.	Air Quality	23
3.5.	Stormwater, Water Cycle Management and Flooding	23
3.6.	Noise Management	26
3.7.	Salinity and Soil Management	29
3.8.	Night Sky Protection	29
3.9.	Site Contamination	30
3.10.	Development on and Adjacent to Electricity and Gas Easements	32
3.11.	Aboriginal Heritage	32
3.12.	Non-Indigenous Heritage	34
4.	Precinct Planning Outcomes	38
4.1.	Menangle Park - Urban Structure	38
4.2.	Movement Network	39

4.3.	Public Domain, Parks and Community Infrastructure	54
4.4.	Crime Prevention through Environmental Design	60
5.	Residential Development and Subdivision	62
5.1.	Residential Density	62
5.2.	Block and Lot Layout	66
5.3.	Subdivision Approval Process in the R2 and R3 Zones	74
6.	Residential Development	79
6.1.	Site Responsive Design	79
6.2.	Sustainable Building Design	79
6.3.	Cut, Fill and Retaining Walls	80
6.4.	Dwelling Height, Massing and Siting	83
6.5.	Zero Lot Lines	83
6.6.	Landscaped Area	84
6.7.	Private Open Space	85
6.8.	Communal Open Space	88
6.9.	Garages, Site Access and Parking	89
6.10.	Visual and Acoustic Privacy	90
6.11.	Fencing	93
6.12.	Dwelling Design Controls by Zone	95
6.13.	Additional Controls for Certain Dwelling Types	103
6.14.	Other development in residential areas	114
7.	Menangle Park Town Centre	119
7.1.	Vision and Objectives for the Town Centre	119
7.2.	Indicative Town Centre Layout	120
7.3.	Land Uses	121
7.4.	Public Domain	123
7.5.	Built Form	125
7.6.	Setbacks and Street Activation	130
7.7.	Solar Access	132
7.8.	Mobility and Access	132
7.9.	Land to which these Controls Apply	141



1. Application

1. Application

1.1. Name and Application of this Plan

This Development Control Plan (DCP) is the Menangle Park Development Control Plan (DCP) 2023. It has been prepared pursuant to the provisions of Section 3.43 of the *Environment Planning and Assessment Act 1979*.

The DCP applies to land in the Menangle Park Precinct shown on the Land Application Map in **Figure 1.1**.



Figure 1.1 Land Application Map (Satellite) - * Glenlee Precinct is currently not included in this Part 8A Menangle Park DCP and is the subject of an independent Precinct DCP.

1.2. Projects Overview

The purpose of this Part is to identify the planning, design and environment objectives and controls against which Campbelltown City Council will assess future development applications in Menangle Park.

This part is also intended to promote high quality urban design outcomes for the release area within the context of environmental, social and economic sustainability.

This part of the DCP addresses the requirements of clause 6.3 *Development control plan* of the Campbelltown Local Environmental Plan 2015.

1.3. Compliance with the LEP

This part of the DCP addresses the requirements of clause 6.3 *Development control plan* of the Campbelltown Local Environmental Plan 2015.

<p>(a) A staging plan for the timely and efficient release of urban land, making provision for necessary infrastructure and sequencing</p>	<p>Development may be undertaken in a single stage (as shown in Figure 1.2 Staging Plan) or in any number of sub-stages provided that development reflects the progressive delivery of road, utility and local infrastructure over the land. Development applications will require an explanation of compatibility with the delivery of required infrastructure.</p>
<p>(b) An overall transport movement hierarchy showing the major circulation routes and connections to achieve a simple and safe movement system for private vehicles, public transport, pedestrians and cyclists.</p>	<p>This infrastructure shall be provided in accordance with section 4.2 of this DCP.</p>
<p>(c) An overall landscaping strategy for the protection and enhancement of riparian areas and remnant vegetation, including visually prominent locations, and detailed landscaping requirements for both the public and private domain.</p>	<p>All development shall be undertaken in accordance with section 4.3 of this DCP.</p>
<p>(d) A network of passive and active recreational areas.</p>	<p>This infrastructure shall be provided in accordance with section 4.3 of this DCP.</p>

<p>(e) Stormwater and water quality management controls</p>	<p>All development shall be undertaken in accordance with:</p> <ul style="list-style-type: none"> ▶ Campbelltown City Council Engineering <p>Design for Development (guide)</p> <ul style="list-style-type: none"> ▶ Clause 2.18 of Volume 1 of this DCP ▶ Work on Land Adjacent to the Upper Canal Corridor Volume 4 Clause 1.11.1.
<p>(f) Amelioration of natural and environmental hazards, including bushfire, flooding and site contamination and in relation to natural hazards, the safe occupation of and the evacuation from, any land so affected.</p>	<p><u>Bushfire</u>: The development precincts have been informed by the bushfire risks associated with the site. All future development is to comply with section 3.3 of this DCP and the NSW Rural Fire Services Planning for Bushfire Protection 2019, or equivalent.</p> <p><u>Flooding</u>: The development precincts have been informed by the flooding characteristics of the site. All future development is to comply with Council's Engineering Design for Development (Guide).</p> <p><u>Contamination</u>: All future development is to comply with State Environmental Planning Policy (Resilience and Hazards) 2021.</p> <p><u>Mine Subsidence</u>: All future development is to comply with the requirements of Subsidence Advisory NSW.</p>
<p>(g) Detailed urban design controls for significant development sites.</p>	<p>This precinct contains the Menangle Park Town Centre. See Section 7 of this DCP for detailed controls.</p>
<p>(h) Measures to encourage higher density living around transport, open space and service nodes.</p>	<p>All development shall comply with the Indicative Layout Plan.</p>
<p>(i) Measures to accommodate and control appropriate neighbourhood commercial and retail uses.</p>	<p>All development shall comply with the Indicative Layout Plan.</p>
<p>(j) Suitably located public facilities and services, including provision for appropriate traffic management facilities and parking.</p>	<p>Public facilities and services are to be provided in the E1 Local Centre Zone and shall be provided in accordance with Council's Engineering Design for Development (Guide).</p>

Note: Unless otherwise specified, a reference to a section of figure is a reference to the corresponding section or figure in this Volume 2, Part 8A Menangle Park DCP 2023 of Campbelltown (Sustainable City) Development Control Plan.

1.4. Staging

Objective

- a. Ensure the orderly development of the land and assist in the coordinated programming and provision of necessary infrastructure and sequencing.
- b. Ensure staging of works protects the amenity of future residents from the effects of mining, industrial and waste disposal activities.
- c. Ensure services and works are carried out in logical and related stages.
- d. Ensure the overall order of residential subdivision includes provision of community infrastructure to deal with stormwater drainage in an ecologically sensitive manner.

Controls

1. The overall stages proposed are as follows and are illustrated in the Staging Plan at Figure 1.2:
 - Stage 1 – Menangle Park Central and Village
 - Stage 2 – Menangle Park South
 - Stage 3 – Menangle Park North
 - Stage 4 – Paceway, Employment and Environmental
2. Development is to be generally undertaken in accordance with the Staging Plan. Where alternative staging is proposed, the Applicant is to demonstrate that sufficient utilities services and community infrastructure is, or is capable of being made, available to service the development.
3. Sub-stages can be undertaken concurrently within the Menangle Park Precinct.

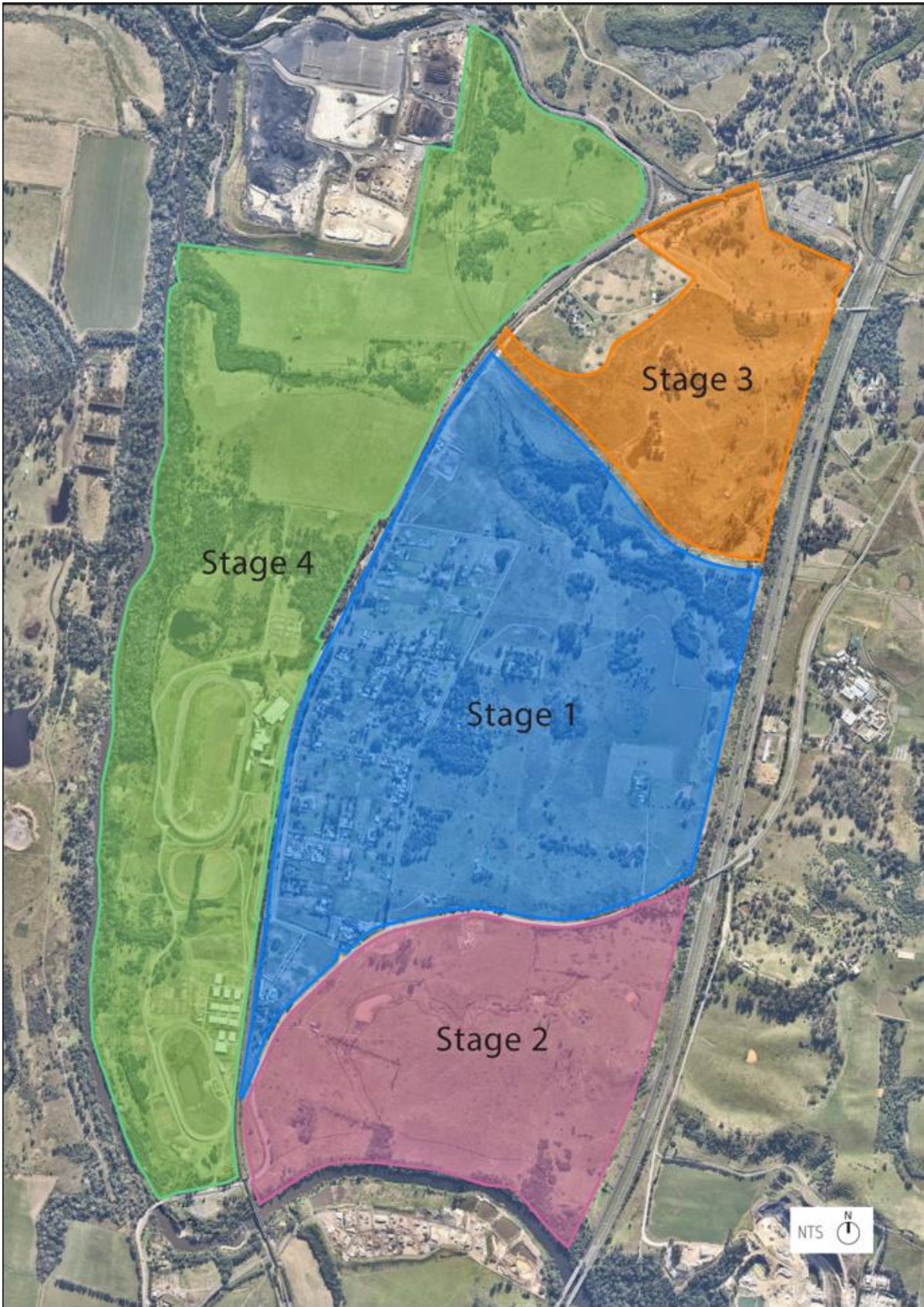


Figure 1.2 Staging Plan

1.5. Relationship to other Planning Documents

1.5.1. Campbelltown Council Planning Documents

The controls applicable to development of land within Menangle Park are generally detailed in this Part. When a development control is not specified in this Part, development should be consistent with all other relevant controls contained in Volume 1 of the Campbelltown (Sustainable City) DCP 2015. Where there is an inconsistency between controls in Volume 1 and any other part of this DCP, this Part will prevail to the extent of the inconsistency.

Campbelltown City Council's Engineering Design for Development applies to development specified in this Part.

1.6. Development Applications

1.6.1. Information to be submitted with Development Applications

Council's checklist for information required to be referred to prior to preparation of any application and is available at www.campbelltown.nsw.gov.au.

The information required includes (but not limited to) the following:

- ▶ Survey Plan
- ▶ Site Plan
- ▶ Site Analysis Plan
- ▶ Floor Plan
- ▶ Elevation Plan
- ▶ Section Plan
- ▶ Shadow Diagrams
- ▶ Landscape Plan
- ▶ Statement of Environmental Effects
- ▶ Stormwater Concept Plan
- ▶ Waste Management Plan
- ▶ Subdivision Plan
- ▶ Advertising Structure
- ▶ Photomontage and Scale Model
- ▶ NatHERS / BASIX Certificate
- ▶ Heritage Impact Statement
- ▶ Access Report
- ▶ Flora and Fauna Reports
- ▶ Contamination Report
- ▶ Bushfire Report

1.6.2. Variations to Development Controls and DCP Amendments

Compliance with the Indicative Layout Plan

The Indicative Layout Plan (ILP) in Figure 2.1 is intended to show how the overall Precinct will develop over time. It shows how the numerous developments, undertaken over a number of years, will come together to ensure the overall development of the Precinct is integrated, sustainable and attractive. However, it is recognised that some variation to the layout shown on the ILP may be reasonable to address new or more detailed information about the site, or other factors that might influence individual developments.

Council may grant consent to a proposal that differs from the ILP where the variation is considered to be minor and the proposal is demonstrated to be generally consistent with the ILP. DAs will be considered on their merits, and Applicants are required to demonstrate that the proposed variation is:

- ▶ Consistent with the Vision, Desired Future Character Statement and Principles in Part 2 of this DCP, and,
- ▶ Not likely to significantly impact on the amenity, safety or environmental quality of adjoining lands, or the ability of adjoining development to be carried out generally in accordance with this DCP.

Compliance with Objectives and Controls in this DCP

Each section in this DCP contains Objectives and Controls relating to various aspects of development (for example, building setbacks, requirements for car parking, or minimum requirements for landscaping, etc.).

The Objectives enable Council and Applicants to consider whether a particular proposal will achieve the development outcomes established for the Precinct in the ILP. The Controls establish consistent standards, which if met, mean that development should be consistent with the Objectives. However, in some circumstances, strict compliance with the controls may not be necessary, or may be difficult to achieve because of the particular characteristics of a development site. In these situations, Council may grant consent to a proposal that does not comply with the Controls in this DCP, providing the intent (i.e. the Objective/s) of the Controls is achieved. Where a variation is sought it must be justified in writing by indicating how the development will meet the Objectives of the relevant Control and/or is generally consistent with the ILP.



2.

Vision & Objectives

2. Vision and Objectives

2.1. Menangle Park Vision, Desired Future Character Statement and Principles

Desired Future Character Statement

Menangle Park will be an attractive residential community set against a natural landscape backdrop. Its historic connections to the Menangle Park Paceway, Glenlee Homestead and the Nepean River will provide important cues in establishing the character of the future residential community.

The precinct will comprise urban environments that are healthy, well connected and preserve natural landscape and waterways. It will feature spacious urban parks, a network of pathways and green links, that draw families out of their homes and places of work, into and around the new town, experiencing nature, the Nepean River and the vibrant town centre.

The town centre will be strategically located within Menangle Park, providing local shops and services, and acting as a focus for community activities. Local employment opportunities will be offered within the Town Centre and the Menangle Park Employment Area. An integrated transport, cycle and pedestrian network will facilitate improved access within Menangle Park and to surrounding areas, particularly the Macarthur Regional Centre and Campbelltown City Centre.

Menangle Park will provide for a mix of housing types, ranging from mixed use, high density and medium density housing in and around the town centre through to medium and large lot dwellings elsewhere. Particular care will be taken with the lot layout and siting of dwellings in areas of high visual and environmental sensitivity.

Menangle Park will also play an important role as the Southern Gateway to Campbelltown. Particular consideration will be given to establishing an attractive tree canopy, especially as part of the streetscape, to soften the visual impact of future urban development, respect the earlier rural character of the area and minimise urban heat island impacts.

Along with Club Menangle, the Australian Botanic Gardens and the Nepean River, Menangle Park will draw visitors to the region, a further catalyst for investment and growth in Greater Macarthur. Menangle Park will be the Greater Macarthur's contemporary place to live, visit, play and work.

Principles

- a. To facilitate urban development that promotes environmental sustainability objectives, innovation and resilience through best practices.
- b. To facilitate urban development that mitigates urban heat island effects through development controls regarding construction materials, landscaping and open space.
- c. To ensure all development achieves a high standard of urban and architectural design quality that promotes a vibrant, successful Town Centre and residential areas.
- d. Deliver a broad range of housing and lot typologies to meet the future need of a diverse community. Focusing on higher residential densities around landscaped open space amenity, transport and the town centre. Lower density residential areas to be focused around the periphery of the precinct at important rural interfaces and significantly sloping land.

- e. Recognise and ensure all future development is cognisant of the history of Menangle Park by sensitively responding to the interface and surrounding areas of Glenlee House, Mount Annan Botanic Gardens and Club Menangle Racecourse, while being sympathetic to State and Locally listed items of heritage significance.
- f. Provide quality landscape outcomes in both the public and private domains to counter the urban heat island effect and contribute to the creation of the green spine and open space.
- g. Provide integrated stormwater and flood control infrastructure to protect properties and improve the utilisation of publicly accessible open space.
- h. Deliver a new diverse town centre comprising of active retail and business uses at the ground floor with new civic building and infrastructure.
- i. Recognise the importance of contributing towards healthy, active lifestyles through efficient pedestrian and cycle connections.
- j. To provide social infrastructure that is flexible, adaptable and fit for purpose.
- k. To protect and enhance riparian corridors, wetlands, significant trees and native vegetation.
- l. To ensure the effective delivery of critical infrastructure in a timely , cost efficient, and equitable manner, which does not burden the community.
- m. To ensure all proposals for new development demonstrate a high standard of ecologically sustainable design maintaining high value vegetation, natural bushland and native habitats.
- n. Protect and enhance the history and culture of the Aboriginal custodians of the land within the development of buildings and public spaces which facilitate cultural practices and connection to Country.

2.2. The Indicative Layout Plan

An ILP is contained in Figure 2.1 below. The ILP forms the basis for urban development in the Precinct by setting out:

- ▶ Road Networks;
- ▶ Public transport routes;
- ▶ Open space and drainage networks;
- ▶ Locations of land uses including residential development, schools, community facilities, utilities, centres and employment lands;
- ▶ Areas requiring protection because of environmental or heritage values; and
- ▶ Density and types of housing that are preferred in various parts of the Precinct.

Objectives

- a. To ensure development in the precinct occurs in a coordinated manner consistent with the Menangle Park ILP.

Controls

1. All DAs are to be generally prepared in accordance with the ILP.
2. When assessing DAs, Council will consider the extent to which the proposed development is consistent with the ILP.
3. Any proposed variations to the general arrangement of the ILP must be demonstrated by the Applicant, to Council's satisfaction, to be consistent with the Vision, Desired Future Character Statement and Principles in Section 2.1 of this DCP.

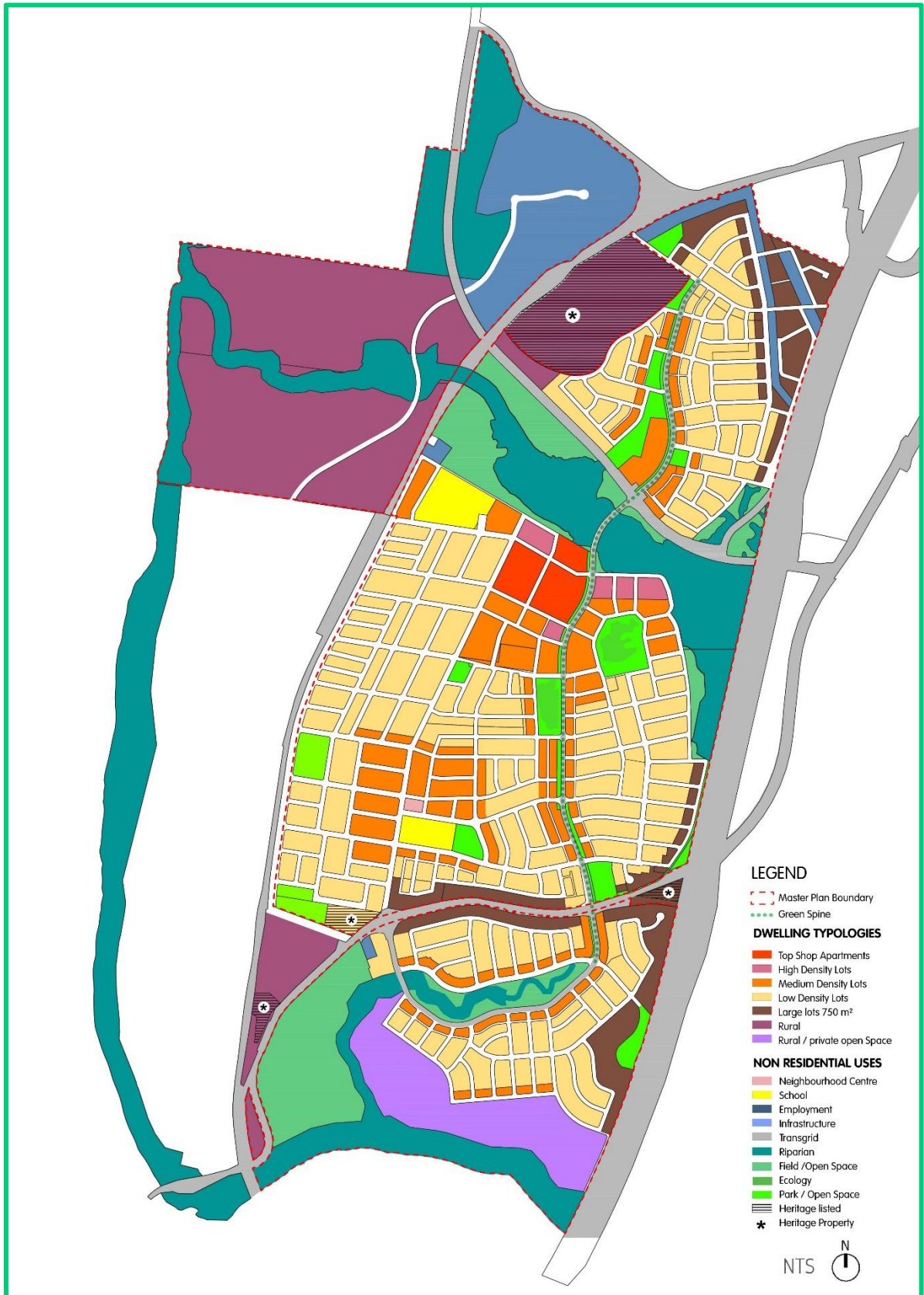


Figure 2.1 Indicative Layout Plan (ILP)



3.

Environmental Management

3. Environmental Management

3.1. Riparian Corridors

Objectives

- a. Protect, restore and enhance the environmental qualities of water courses, in particular the Nepean River and Howes Creek.
- b. Allow the use of riparian corridor buffers for low impact recreational activities such as walking and cycling.
- c. Manage riparian corridors, wherever possible, in single ownership and as a continuous corridor.
- d. To ensure that land development does not result in the degradation or loss of groundwater dependent ecosystems.
- e. To site accessways to and within a riparian buffer so as not to compromise the ecological integrity of any existing riparian vegetation, stream bed or bank stability,
- f. Road crossings, active transport paths and access points to riparian corridors are to have a minimum impact by implementing ecologically informed design principles.
- g.

Controls

1. The impact of salinity on the landscape and watercourses shall be managed in accordance with the Local Government Salinity Initiative series of booklets provided by the NSW Office of Environment and Heritage.
2. All core riparian zones are to be rehabilitated and revegetated with appropriate native vegetation having regard to their drainage function and vegetation management for bushfire protection.
3. A works plan is to be submitted to Council for development applications on land containing a riparian corridor or for subdivision of land adjacent to a riparian corridor. The works plan is to:
 - a. Identify existing trees to be retained and existing trees to be removed;
 - b. be consistent with NSW Department of Primary Industries Office of Water guidelines; and
 - c. indicate the location, type and size of all new plant species.
4. Where wetlands are proposed, a vegetation management plan outlining ownership, ongoing management, annual maintenance costs and initial development costs shall be submitted with any development application.

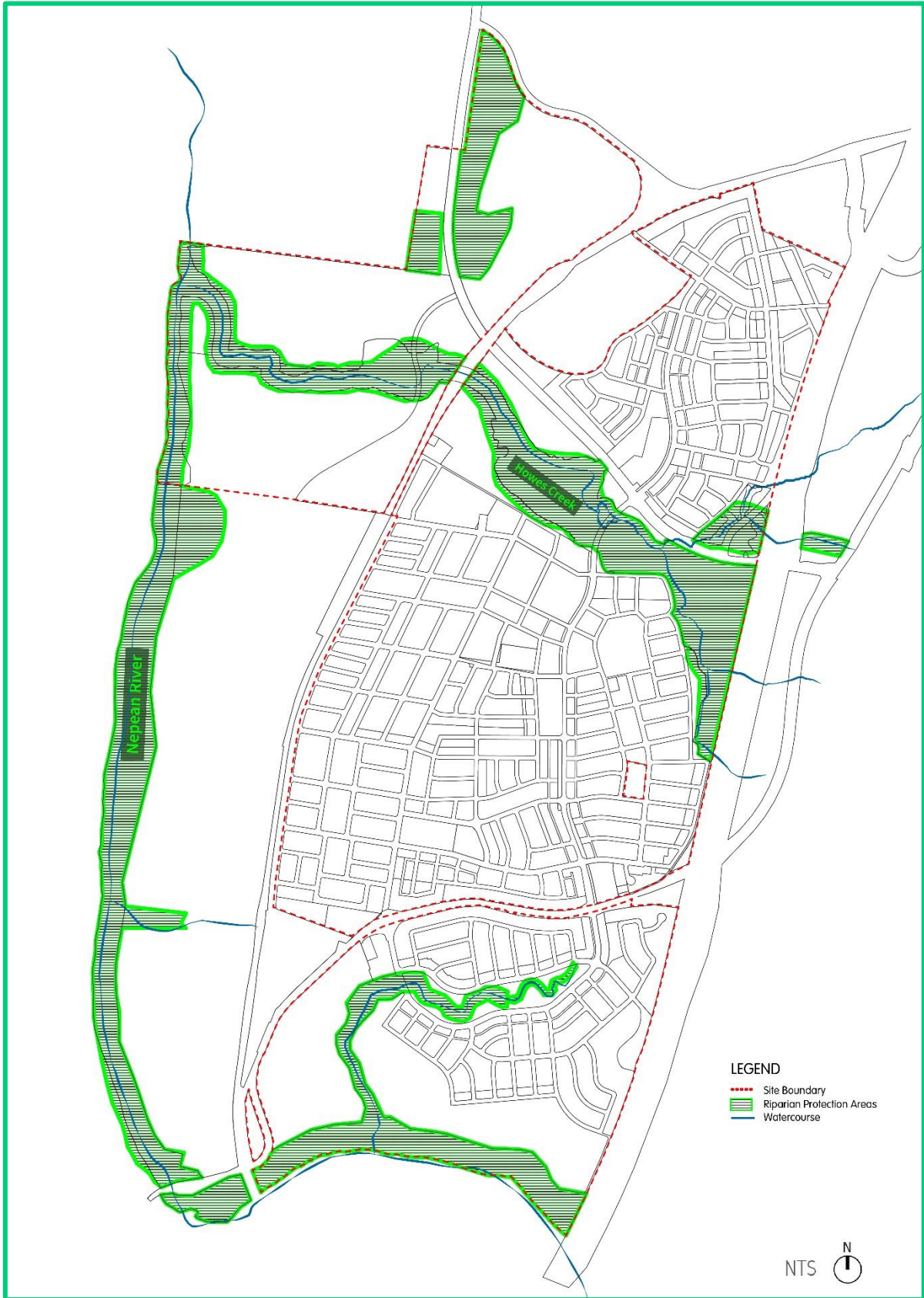


Figure 3.1 Riparian Protection Areas

3.2. Flora and Fauna Conservation

Objectives

- a. To conserve and rehabilitate native vegetation within the Menangle Park Urban Release Area in areas including private allotments, the public domain and within road reserves.
- b. To preserve and enhance the ecological values of the Menangle Park Urban Release Area and improve habitat connectivity.
- c. To help ensure that development in the Menangle Park Urban Release Area results in no net loss of biodiversity values.
- d. Ensure examples of native ecological communities found within the Menangle Park Urban Release Area are included in the open space network (which includes the offset areas) and are appropriately conserved.
- e. To conserve and enhance tree canopy cover within the Menangle Park Urban Release Area and contribute towards achieving the Greater Sydney Region Plans 40% canopy cover target.

Controls

1. Proposed subdivision of land identified in Stage 1 is to retain all vegetation within the areas zoned RE1 and critically endangered species in general and ensure protection of related groundwater regimes.
2. For sites containing native vegetation and fauna habitat:
 - a. The development shall be sited, designed and managed to avoid and minimise any negative impact on biodiversity, where possible.
 - b. Where an impact on biodiversity cannot be avoided and no reasonable alternative is available proposed development shall be sited, designed, constructed and managed in a manner that minimises the impact on biodiversity and maintains habitat connectivity as much as practicable.
3. Removal, rehabilitation and regeneration of native vegetation and trees should be undertaken in accordance with an offsetting strategy that has been prepared to the satisfaction of Council.
4. Any approved tree clearing must be replaced at a ratio of at least 2:1 (new to existing) with appropriate pot sizes at the time of planting.
5. For development applications, the Applicant is to demonstrate:
 - a. the approach to incorporating and protecting existing trees as part of the development design to enhance urban amenity and provide established urban canopy across the development.
 - b. whether an efficient water source for trees has been incorporated into the design.

- c. potential opportunities for alternative water supplies, including stormwater capture, sewer harvesting and the like, to ensure adequate soil moistening during warm months and drought conditions.
 - d. Any buildings and access driveways should be located to avoid or minimise removal of existing trees and facilitate appropriate street tree planting.
6. Native trees and other vegetation are to be retained where possible by careful subdivision planning to incorporate trees into areas such as private allotments, the public domain or within road reserves.
 7. Native vegetation is to be conserved and managed in accordance with the Guidelines for Corridors prepared by the NSW Office of Water.
 8. All subdivision design and bulk earthworks are to consider the need to minimise weed dispersion and to eradicate weeds on site. If Council believes that a significant weed risk exists, a Weed Eradication and Management Plan outlining weed control measures during and after construction is to be submitted with the subdivision development application.

3.3. Bushfire Hazard Management

Objectives

- a. To prevent loss of life and property due to bushfires by providing for development compatible with bushfire hazard, and
- b. To encourage appropriate management of bushfire-prone areas.

Controls

1. Bushfire prone areas in the Menangle Park Precinct are shown in Figure 3.2. For developments in these areas, reference is to be made to Planning for Bushfire Protection 2019 in subdivision planning and design. All development in bushfire prone lands is to be consistent with Planning for Bushfire Protection 2019.
2. Subject to detailed design at DA stage, the indicative location and widths of Asset Protection Zones (APZs) are to be provided generally in accordance with the Bushfire risk and APZ Requirements under Planning for Bushfire Protection 2019. APZs and construction standards are to be accurately mapped and detailed for each affected lot on plans submitted with the development application.
3. The Bushfire Attack Level (BAL) shall be determined by a person recognised by the NSW RFS as a suitably qualified consultant in bushfire risk assessment and meet:
 - a. A maximum of BAL - 12.5 for Special Fire Protection Purposes (SFPP)
 - b. A maximum BAL – 29 for all other development
4. APZs:
 - ▶ may incorporate roads, verge areas and flood prone land,
 - ▶ are to be maintained in accordance with the guidelines in Planning for Bushfire Protection 2019,

- ▶ may incorporate private residential land, but only within the building setback (no dwellings are to be located within the APZ),
 - ▶ are not to burden public land, and
 - ▶ are to be generally bounded by a public road or perimeter fire trail that is linked to the public road system at regular intervals in accordance with Planning for Bushfire Protection 2019. □ Are to be maintained in accordance with the Planning for Bushfire Protection 2019.
5. Where an allotment fronts and partially incorporates an APZ it shall have an appropriate depth to accommodate a dwelling with private open space and the minimum required APZ. The APZ will be identified through a Section 88B instrument.
 6. Temporary APZs, identified through a Section 88B instrument, will be required where development is proposed on allotments adjoining undeveloped land that is mapped as bushfire prone. Once the adjacent stage of development is undertaken, the temporary APZ will no longer be required and shall cease.
 7. Buildings adjacent to APZs are to be constructed in accordance with the requirements of Appendix 3 of Planning for Bushfire Protection 2019 and Australian Standard 3959-1999-Construction of Building in Bushfire Prone Areas.
 8. An emergency bushfire evacuation and management plan should be prepared as part of each Development Stage and indicate the proposed emergency management arrangements for such developments.



Figure 3.2 Bushfire Prone Lane Map Menangle Park

3.4. Air Quality

Objectives

- a. Minimise land use conflicts between residential land uses and other potentially incompatible land uses through the establishment of appropriate buffers.
- b. Minimise the potential for adverse air quality impacts from current / future industrial activities on residential development.
- c. Provide adequate buffers to ameliorate anticipated air quality impacts as a result of industrial activities.

Controls

1. A buffer distance of at least 200 metres is to be provided between any operating coal seam gas well and new residential development. The consent authority may however consider a reduced buffer where evidence is provided that residential amenity will not be adversely impacted in terms of air quality as a result of coal seam gas operations.
2. A buffer distance of at least 200 metres is to be provided between any sand extraction and new residential development within the Menangle Park precinct, unless it has been demonstrated that suitable dust management practices can be put in place to reduce this buffer.

3.5. Stormwater, Water Cycle Management and Flooding

Objectives

- a. To manage the flow of stormwater and integrate Water Sensitive Urban Design in the urban parts of the Menangle Park Precinct.
- b. To minimise the potential of flooding impacts on development.
- c. To incorporate best practice stormwater management principles and strategies in development proposals.
- d. To avoid adverse impacts from stormwater runoff on other properties as a result of development in the catchment for all storm events up to and including a 1% Annual Exceedance Probability (AEP) flood event.
- e. To minimise potable water consumption and maximise re-use of stormwater within urban areas, and
- f. To maintain and enhance the quality of runoff to natural water bodies and the Nepean River.

Controls

All future developments must comply with the Council's Engineering Design for Development (as amended), Volume 1, Part 2, 2.10 of the Campbelltown (Sustainable City) DCP, the Western Sydney Engineering Design Guidelines and the Menangle Park Water Cycle Management Report prepared by SMEC, dated 14 November 2018

1. The pattern of subdivision is to ensure that no new dwellings are located within the post development 1% AEP Flood extent.
2. All buildings are to be located above the Flood Planning Level (FPL). The FPL is a level 300mm-500mm depending on flow depth above the 1% AEP flood level.

3. The 1% AEP flood extent relating to creek flows (not the Nepean River) may be varied based on more detailed flood studies that are prepared to the satisfaction of the Council.
4. Pedestrian and cycle pathways and open space may extend within the 1% AEP flood level, provided the safe access criteria contained in the NSW Floodplain Development Manual are met. Reference should also be made to Appendix B (Riparian Protection Area controls).
5. Where development is proposed within or adjacent to land that is identified as being affected by the 1% AEP level, a detailed flood study is to be undertaken to confirm the extent of the flood affectation on the subject land.
6. Filling of land within the floodway is not permitted due to its function as the main flow path for flood waters and the possibility of a significant threat to life and property in a major flood. Filling of flood storage areas may only be considered where offset storage is provided and modelling provided that demonstrates no adverse impacts.
7. Stormwater within new subdivisions is to be managed through a gravity network of pipes and overland flows generally following streets where flow volumes exceed the capacity of pipes.
8. Flows in roads must not exceed safety criteria as set out in Section 4.13.4 of Campbelltown City Council's Engineering Design for Development (as amended)
9. The acquisition or dedication of drainage easements over downstream properties will be required where direct access to a drainage system or discharge of stormwater to a creek via the street network is not possible (i.e., street kerb and gutter, piped system or open channels and watercourses). However, the design of subdivisions is to generally comply with Control No. 1 above and management of stormwater through easements will only be permitted by Council in exceptional circumstances where no other practical solution is available.
10. All outlet structures discharging to a creek system shall provide scour protection and energy dissipaters to minimise erosion of creek banks and beds. The number of outlet connections is to be minimised.
11. Some development areas within certain areas may not drain to the trunk stormwater system. In these locations, stormwater detention is managed by offsetting flows from these areas in detention basins located on other catchments. Water quality treatment is still required for these areas and is to be managed within the street network.
12. The trunk stormwater system is to be constructed in accordance with the Council's Engineering Design for Development.
13. All water quality devices are to achieve Gross Pollutants >95% Total Suspended Solids 85%, Total Nitrogen 55%, Total Phosphorus 70%, Stream Erosion Targets (SEI) 1-2 And sized to cater for stormwater flows up to 3 months ARI (4 EY) storm events.
14. Where flood detention basins occur, water quality treatment areas can be co-located within the detention basin to reduce WSUD infrastructure area requirements.

Note: for development on 'affected land' under s 2.163 of State Environmental Planning Policy (Transport and Infrastructure) 2021 (T&I SEPP), development is to be consistent with the Water NSW Guideline.

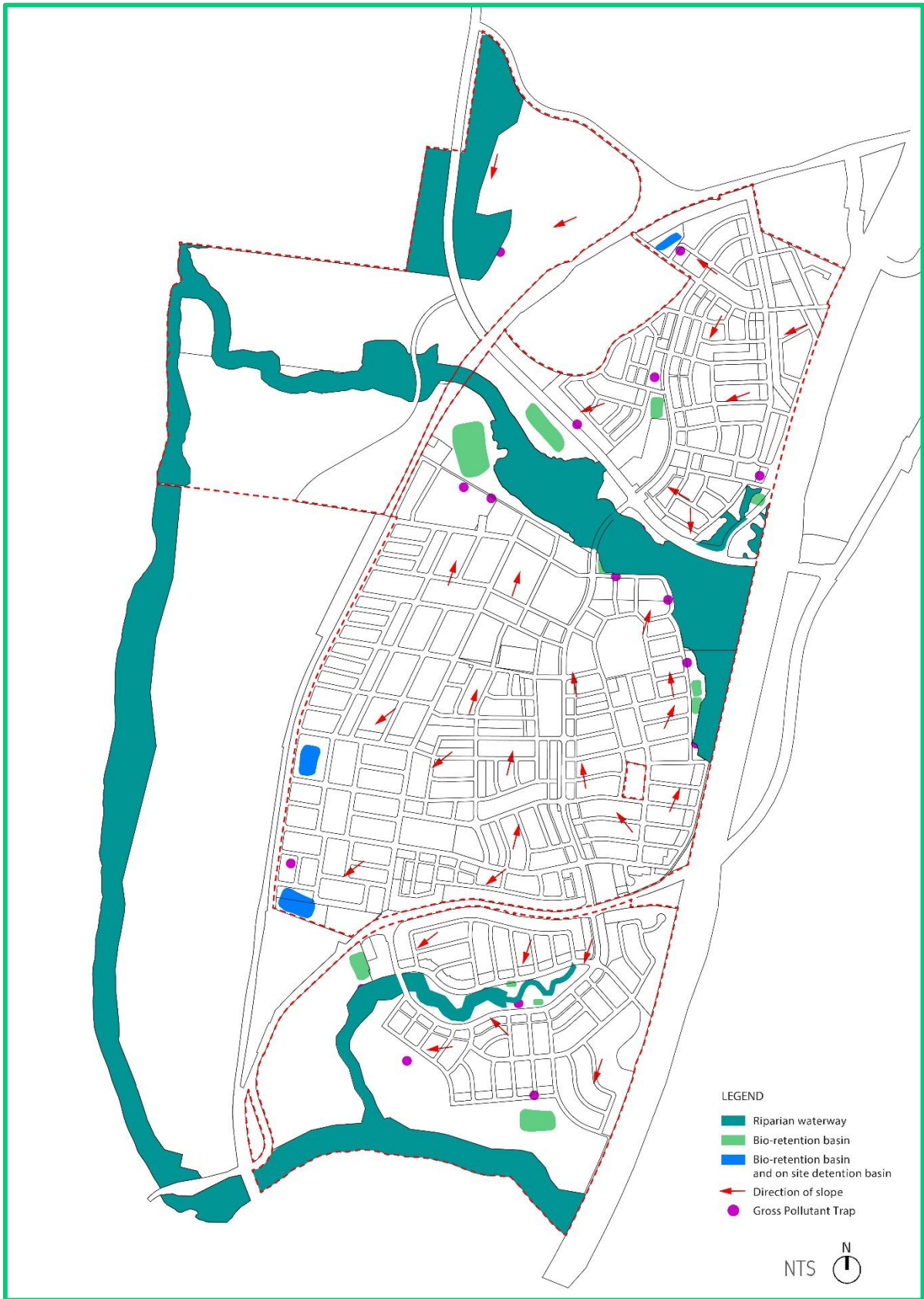


Figure 3.3 Drainage sub-catchments and WSUD elements for managing stormwater quality

3.6. Noise Management

Objectives

- a. Limit environmental noise levels due to road traffic and railway noise.
- b. To minimise the impacts of noise from major transport infrastructure and employment areas on residential amenity.
- c. To achieve an acceptable residential noise environment whilst maintaining well designed and attractive residential streetscapes.

Controls

The following controls apply where residential and other noise sensitive development is proposed within areas affected by road and rail noise as shown in Figure 3.4.

1. A noise assessment report which includes acoustic treatment requirements for dwellings and immediate external environments is to be prepared by a suitably qualified professional for all subdivision and development proposals within the area of the site affected by road and/or rail noise as shown in Figure 3.4.
2. Compliance with the State Environmental Planning Policy (Transport and Infrastructure) 2021 (or equivalent) is required in regard to Division 15 Railways and Division 17 Roads and traffic.

See Table 3.1 for examples of possible acoustic treatment options:

Table 3.1 Acoustic Treatment Options

Orientation of residences	Residences may be situated within lots along the site boundary so that they provide acoustic shielding for residences at greater distance from the highway, reducing the number of residences requiring noise treatment.
Orientation of rooms and windows	Less noise sensitive rooms such as garages, bathrooms and laundries can be oriented towards the noise source, shielding more noise sensitive areas of the dwelling. Similarly, buildings can be constructed to minimise the number of doors and windows exposed to the noise source.
External walls	Masonry (particularly double brick) or concrete facades provide greater transmission losses than weatherboard or other lightweight structures.
Doors	External doors which open into habitable rooms should be heavy solid-core doors with effective acoustic seals.
Acoustic insulation	Acoustic insulation such as polyester or rockwool/glass wool batts placed between the wall studs of brick veneer and timber framed buildings will reduce the noise entering the building by an additional 5dB(A).
Architectural treatment	Such as double-glazing or provision of enclosed balconies.
Landscape Shielding	Hard and soft landscaping to assist with external alfresco amenity outcomes.

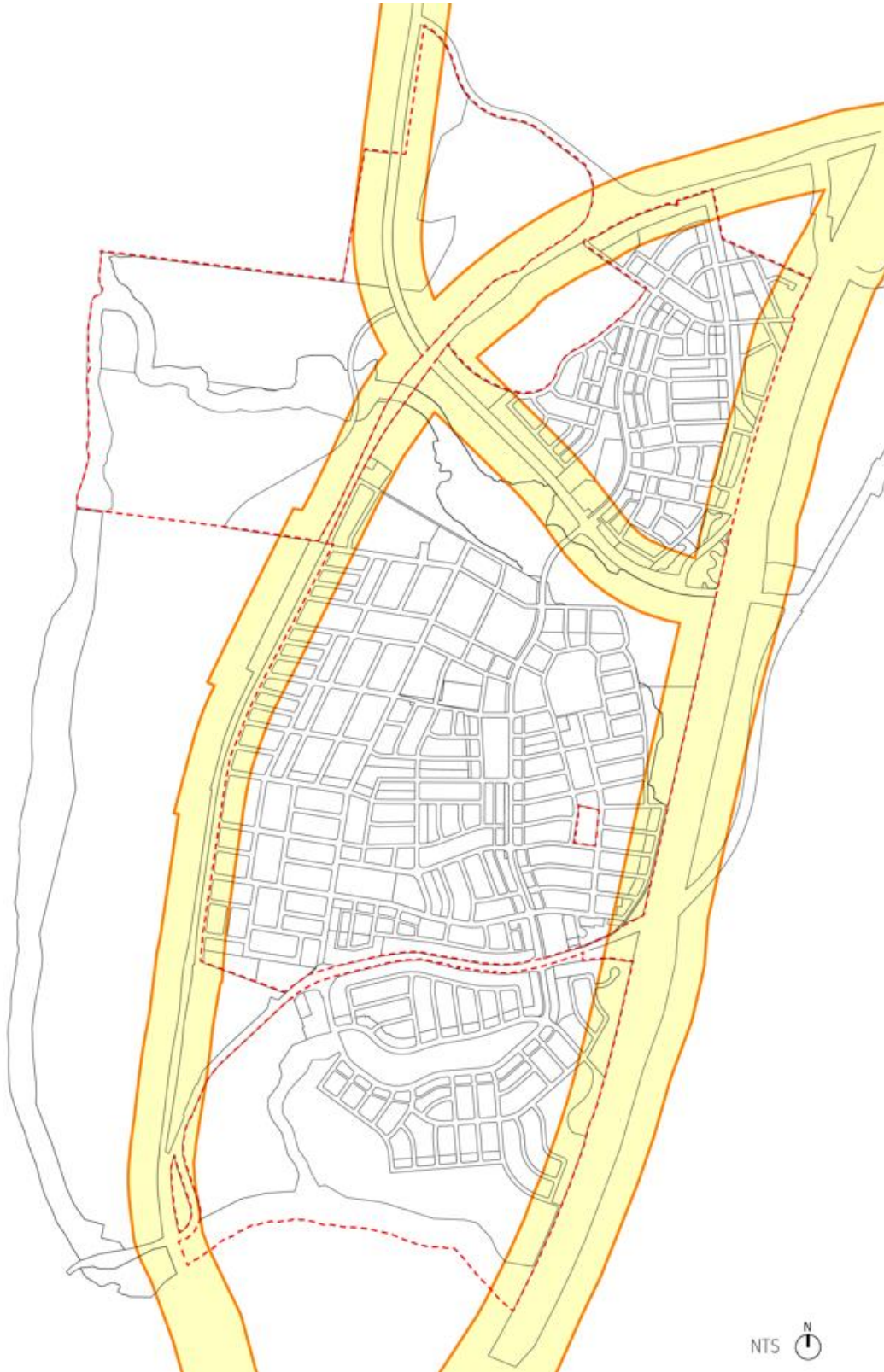


Figure 3.4 Areas impacted by Road and Rail Noise

3.7. Salinity and Soil Management

Objectives

- a. To manage and mitigate the impacts of, and on, salinity and sodicity.
- b. To minimise the damage caused to property and vegetation by existing saline soils, or processes that may create saline soils.
- c. To ensure development will not significantly increase the salt load in existing watercourses, and
- d. To prevent degradation of the existing soil and ground water environment, and to minimise erosion and sediment loss and water pollution due to siltation and sedimentation.

Controls

1. Subdivision development applications that include earthworks on land with a moderate to high risk of salinity, are to be accompanied by information detailing how the design and construction of the proposed subdivision intends to address salinity issues. All works are to comply with the Western Sydney Salinity Code of Practice 2004 (WSROC) and Volume 1, Part 2, 2.14 of the Campbelltown (Sustainable City) DCP.
2. Salinity management is to complement WSUD strategies, improving or at least maintaining the current condition, without detriment to the waterway environment.

3.8. Night Sky Protection

Menangle Park currently affords good night sky visibility, unlike the urban areas of Sydney where ambient light significantly diminishes the ability to see the night sky. As far as practicable, Council wants to ensure that the night sky experience at Menangle Park can remain for future residents.

Objectives

- a. Ensure that the quality of the night sky is not significantly diminished.

Controls

1. Street lighting should be a “full cut-off light fixture”, i.e. a type of fixture that does not allow light (includes dispersed light or glare) to be emitted above a 90-degree, horizontal plane measured from the base of the fixture.
2. Accent lighting, if approved, shall be directed downward on to the building or object and not toward the sky or on to adjacent properties.
3. Direct light emissions are not to be visible above the roof line or beyond the building edge.
4. Spotlighting on landscaping and foliage is to be limited to 150 watts incandescent. The lamp is to be shielded and not create disabling or nuisance glare.

3.9. Site Contamination

Objectives

- a. To minimise the risks to human health and the environment from the development of potentially contaminated land, and
- b. To ensure that potential site contamination issues are adequately addressed at the subdivision stages.

Controls

The following controls apply to development proposals within affected areas of potential environmental concern shown in Figure 3.5.

1. All subdivision development applications (or applications proposing a change of use to a more sensitive land use (e.g. residential, education, public recreation facility, etc.), shall be accompanied by a Stage 1 Preliminary Site Investigation prepared in accordance with the NSW EPA Contaminated Sites Guidelines, State Environmental Planning Policy (Resilience and Hazards) 2021 and the Contaminated Land Management Act 1995 and relevant Council Policies.
2. Where the Stage 1 Investigation identifies potential or actual site contamination, a Stage 2 Detailed Site Investigation must be prepared in accordance with the NSW EPA Contaminated Sites Guidelines, State Environmental Planning Policy (Resilience and Hazards) 2021 and the Contaminated Land Management Act, 1995 and relevant Council Policies. A Remediation Action Plan (RAP) will be required for areas identified as contaminated land in the Stage 2 Site Investigation.
3. Any remediated areas that are to come into Council ownership shall be remediated to standards appropriate for the end land use.

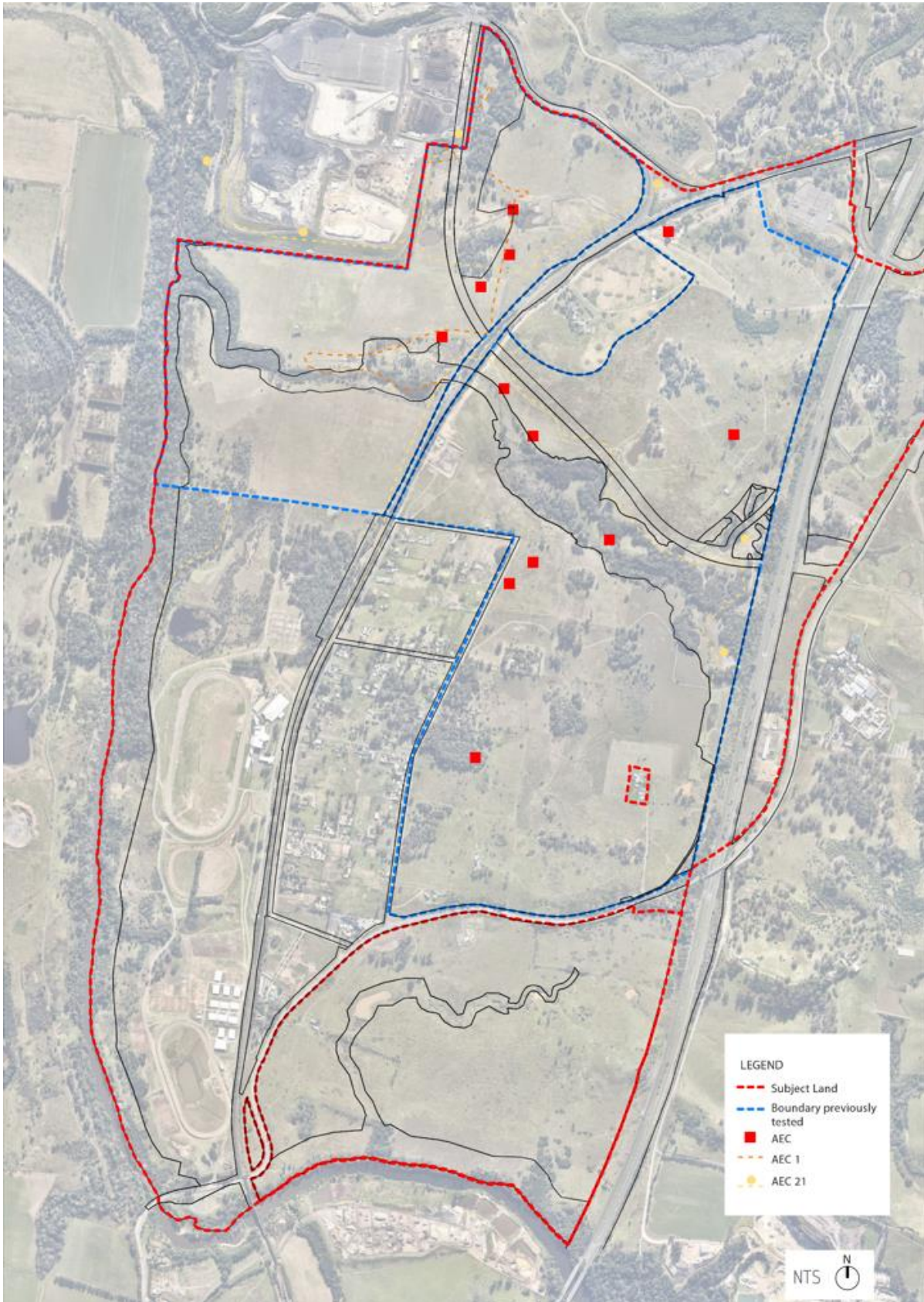


Figure 3.5 Areas of potential environmental concern

3.10. Development on and Adjacent to Electricity and Gas Easements

Objectives

- a. To ensure that development on or adjacent to land affected by major infrastructure easements does not impact on the continued operation of the infrastructure, including maintenance.
- b. To provide for the safety and amenity of residents living near infrastructure easements, and;
- c. To encourage Applicants to find appropriate uses for land burdened by an easement having regard to the particular circumstances in each case.

Controls

1. Where development is proposed on land containing or adjacent to easements, Applicants are to consult with the authority or provider responsible for management of the easement as part of the process of preparing subdivision or other development plans. Any written requirements and conditions of the infrastructure organisation are to be submitted with the DA, and supporting documentation is to demonstrate how the requirements have been addressed in the design.
2. Requirements of the infrastructure organisation in relation to access to easements for inspections and maintenance are to be addressed in the design of the development. Access to the easement from public land (e.g. roads, open space or drainage land) is preferable, subject to acceptable impacts.

3.11. Aboriginal Heritage

Objectives

- a. Ensure that a representative sample of intact Aboriginal landscapes and a range of human responses (represented by the archaeology) are protected.
- b. Ensure that areas of Aboriginal heritage significance are managed into the future on the basis of their Aboriginal (and scientific) heritage and environmental values.
- c. Ensure that sites and/or landscapes with high archaeological potential or Aboriginal significance are retained and protected.

Controls

1. Development shall be guided by an overarching Connecting with Country Framework approach.
2. Development within areas identified as **Zone 1, Zone 2, Zone 3 and Culturally Significant Areas** shown in Figure 3.6 are subject to the controls for indigenous heritage in Clause 2.11.1 of Volume 1 of this DCP.

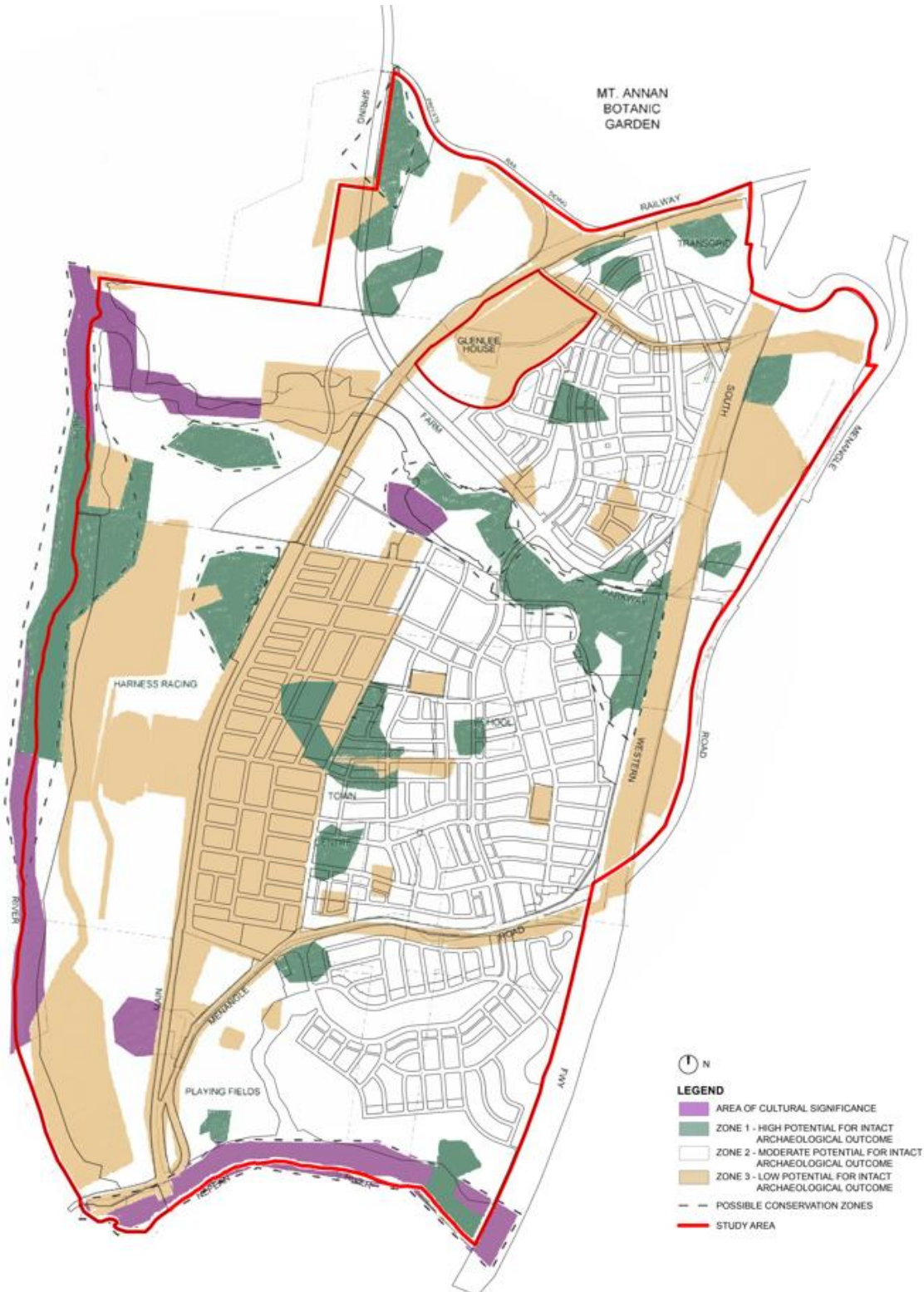


Figure 3.6 Areas of Aboriginal Heritage sensitivity

3.12. Non-Indigenous Heritage

Objectives

- a. Ensure that new development is undertaken in a manner that is sympathetic to, and does not detract from, the heritage significance of heritage items and their settings.
- b. Promote the protection or conservation of those resources where possible.
- c. Ensure the impacts of development on significant views to and from Glenlee House are minimised as far as possible.
- d. Ensure that the Glenlee House interface is sensitively addressed.

Controls

1. The controls for non-indigenous heritage in clause 2.11.2 of Volume 1 of this DCP apply to Menangle Park.
2. An archaeological assessment must accompany any application for development of land (including subdivision involving the creation of allotments for further (future) development) containing a known or potential archaeological site. Known and potential archaeological sites at Menangle Park (excluding Glenlee House) are shown in Table 3.2. The archaeological assessment should be undertaken in accordance with Assessing Significant Historical Archaeological Sites and 'Relics' (Heritage Branch, NSW Department of Planning, 2009).
3. In recognition of the heritage significance of Glenlee House and its curtilage it will be necessary to delineate its boundary. Thus, any development applications for the subdivision of land adjoining Glenlee House will only be considered where a road is provided on the eastern and northern boundaries of this property, which is listed under the NSW Heritage Act 1977.
4. Screen vegetation should be provided along the route of the proposed Spring Farm Parkway to ameliorate the impact on views and vistas to and from Glenlee House.
5. Development applications for subdivision in the vicinity of the ~~Sydney Catchment Authority~~ WaterNSW Upper Canal are to consider the potential impacts (including any stormwater runoff) on the Canal and ensure that any impacts are appropriately mitigated. Refer to clause 2.18 Work on Land Adjacent to the Upper Canal Corridor Volume 1 of this DCP.

Note: for development on 'affected land' under s2.163 of State Environmental Planning Policy (Transport and Infrastructure) 2021 (T&I SEPP), development is to be consistent with the WaterNSW Guideline.

Table 3.2 List of known and potential archaeological sites

Site No	Name	Property Description	Significance
S1	Brien's farm and house site	Lot D DP 19853	Local
S3	Thomas Vardy's estate, including house and stable	Lot 1 DP 249393	Local
S4	Grazier's Inn	Portion 29 Parish Menangle (in road reserve Menangle Road)	Local
S5	Mt Pleasant	Lot 2 DP 598067	Local
S6	Noone's farm	Lot 32 DP 1101983	Local
S7	House and shed of Chinese market gardener	Lot D DP19853	Local
S8	Railway Hotel (Edrop estate)	Lot 1 DP 877582	Local
S9	North Menangle railway station site	Lot 1 DP 877582	Further assessment required
US10	Thomas Taber's original homestead site	Lot 10 122204 (previously Portion 16 Parish Menangle)	Local
S11	Madden's Hill house site	Lot 3003 DP 802845	Local
S12	Ward's house site	Lot 4 DP 249530	Local
US13	Railway sites, stone quarry, tramway, site of workers tent town	Lot 1 DP 249393 Lot 3 DP 236059	Local
US14	Original Erdrop homestead, dairy and worker's cottages	Lot 3 DP 236059	Local
US15	Archaeological sites, Menangle Park Paceway	Lot 10 DP 1022204	Further assessment required
US16	Doyle's property	Lot 7 DP 787284	Further assessment required
US17	Tyson's estate	Lot 2 DP 790254 (previously Portion 27 Parish Narellan)	Further assessment required

NB: The location of some of these sites is unknown and can only be more closely identified through further research and survey work.

(Source: Non-Indigenous Heritage Study Menangle Park NSW, Casey and Lowe Pty Ltd, March 2010)

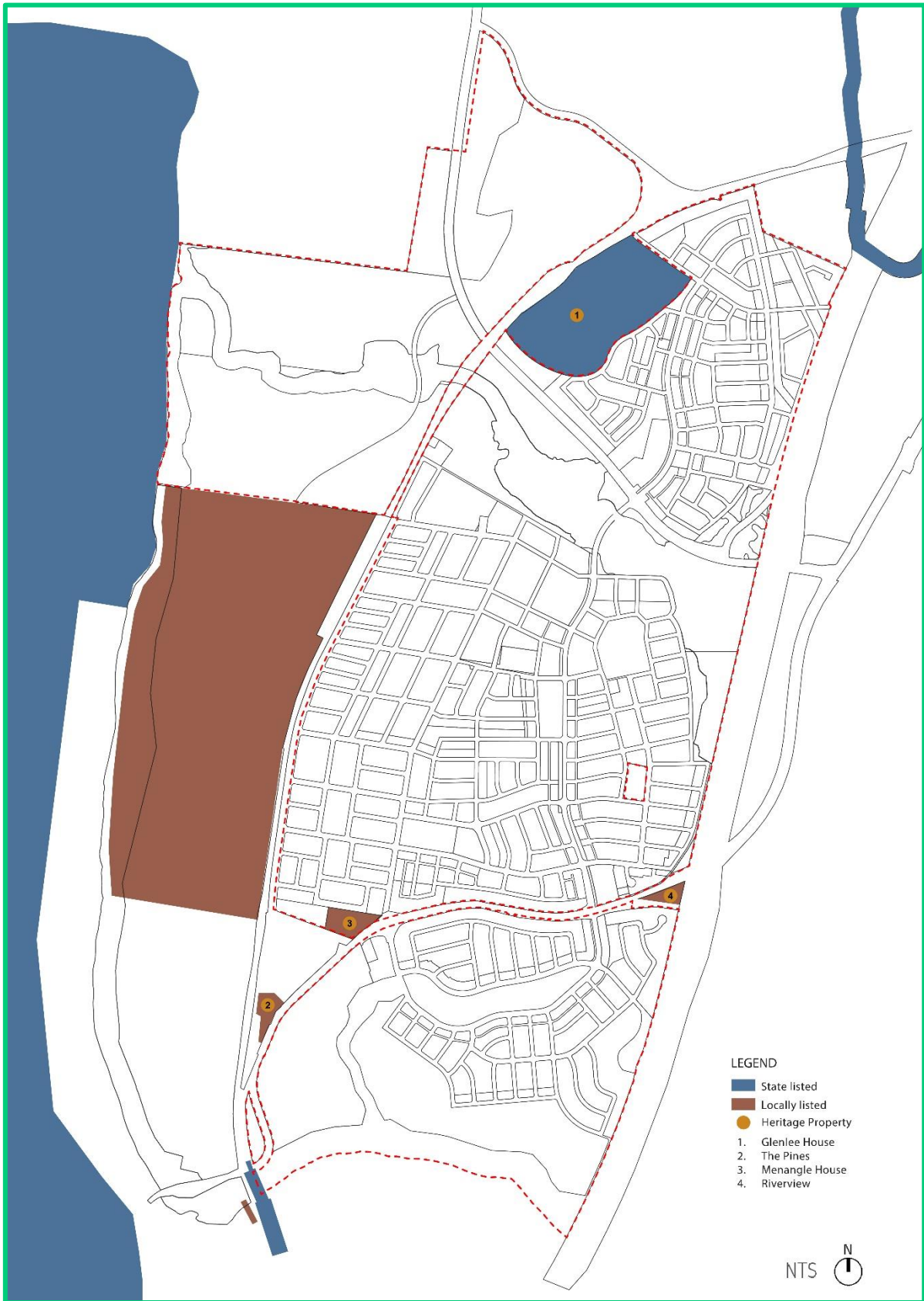


Figure 3.7 Areas of European Heritage sensitivity



4.

Precinct Planning Outcomes

4. Precinct Planning Outcomes

4.1. Menangle Park - Urban Structure

The key elements of the Menangle Park Indicative Layout Plan are outlined below:

- ▶ Approximately 5,250 dwellings in a range of densities, lot sizes and dwelling types.
- ▶ Development of a higher order road hierarchy that provides for flexibility of development of various land uses including creation of a green north-south collector road, a key structural element which delivers distinct characters, land use types and density.
- ▶ A local street network that delivers engaging and active streets that promotes permeable connections and accessibility, trip containment, walking, cycling and urban cooling/ canopy cover.
- ▶ A main street character Town Centre will be the key built identity and focal point for the whole of the Menangle Park community.
- ▶ An integrated movement, destination and open space network that future-proofs Menangle Park to accommodate changes in infrastructure, modal shift and lifestyle trends.
- ▶ New development is to capitalise on existing views and create new views and vistas, particularly to adjacent heritage items. Significant green space located on important high points and roads are to maintain important views and vistas, allowing natural amenities to be enjoyed and celebrated. Visually sensitive areas such as along the freeway, Menangle and Glenlee Roads are to retain a rural character.
- ▶ A range of densities and dwelling types providing housing choice to satisfy the needs of a wide spectrum of households, at different life stages and from varying socio-economic circumstances and lifestyle preferences.
- ▶ Walking and cycling networks including a new north-south green spine comprising an active transport link through the centre of the site. This corridor is designed to provide for workers, students and residents linking key amenities within the site including the Town Centre, schools, open space, neighbourhood centres and residential precincts.
- ▶ Extensive areas of passive and active open space (i.e. sporting fields, local parks and pocket parks and riparian corridor network) and land for environmental conservation.
- ▶ Use of water bodies, performing both an aesthetic and functional (water sensitive urban design) purpose, as a contributing element of the public domain.
- ▶ Sensitive integration and conservation of endangered ecological communities and high value ecological lands generally.

4.2. Movement Network

4.2.1. Street layout and design

Objectives

- a. To provide for the safe and efficient circulation of pedestrians, bicycles and motor traffic and on street parking requirements.
- b. To provide an attractive and safe urban streetscape environment.
- c. To provide a hierarchy of streets with good connectivity that utilises features and landmarks to enhance wayfinding for pedestrians, buses, private vehicles.
- d. To design the street network to consider streets as linear parks and/ or recreation opportunities with a significant tree canopy.
- e. To encourage less motor vehicle use by enhancing pedestrian and cycle connections to the Town Centre, schools and parks.

Controls

1. The design and construction of streets in Menangle Park is to be generally consistent with the relevant typical designs in Figure 4.2-4.7 and Council's Engineering Design Guide. Where any variation to the street network is proposed, the alternative street network is to be designed to achieve the objectives of this section.

Note: Applicants are to consult with WaterNSW during the design development stage regarding affects to WaterNSW access road immediately west of the Hume Highway.

2. Street design is to be in accordance with the indicative street cross sections at Figures 4.2-4.7. Alternative street designs may be permitted on a case by case basis if they preserve the functional objectives and requirements of the design standards.
3. Where streets are proposed as part of an application for subdivision that are located adjacent to public recreation land, drainage land, community facilities or schools, the applicant will be responsible for construction of the full width of the street, unless Council specifies otherwise.
4. Except where otherwise provided for in this DCP, all streets and roundabouts are to be designed and constructed in accordance with the minimum requirements set out in Council's Engineering Design Guide for Development. Where a corner lot fronts a roundabout, the driveway shall be set back 10m from the splay.
5. Street trees are required for all streets. Street planting is to:
 - ▶ Be coordinated with subdivision layout, traffic plan and services,
 - ▶ Use the preferred species listed in Appendix C.
 - ▶ Be consistently used to distinguish between public and private spaces and between different classes of street within the street hierarchy,
 - ▶ Minimise risk to drainage swales, 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,
 - ▶ Be planted in kerb extensions to assist with traffic calming,
 - ▶ Be located to minimise conflicts between trees and driveways,
 - ▶ Provide appropriate shade in summer and solar access in winter,
 - ▶ Provide an attractive and interesting landscape character and clearly define public and private areas, without limiting passive surveillance of the street,
 - ▶ Include a root guard to minimise damage to road pavements and foot paths,
 - ▶ Not interfere with refuse collection and buried utilities, and
 - ▶ Consider items of environmental heritage, heritage conservation areas, historic road alignments and significant view lines.
6. Signage, street furniture and lighting are to be:
- ▶ Designed to reinforce the distinct identity of the development;
 - ▶ Provided at all bus stops,
 - ▶ Coordinated in design and style;
 - ▶ Located so as to minimise visual clutter and obstruction of the public domain; and
 - ▶ Consistent with any landscaping and public domain guidelines or policies specified by council.
7. Water Sensitive Urban Design (WSUD) green infrastructure such as raingardens, swales, tree pits and parking areas where it contributes and meets the objectives and principles of the Menangle Park Stormwater Strategy and Councils Specifications are to be considered.
8. The construction of the proposed realignment of Glenlee Road and its intersection with Menangle Road must be completed before the release of any new residential lots within the northern precinct of Menangle Park Urban Release Area.
9. Any application that impacts the intersection of Glenlee Road and the WaterNSW owned service road (immediately west of the Hume Motorway / Mark Evans Bridge) must demonstrate consultation with WaterNSW in order to ensure that access to the service road is maintained for construction and maintenance vehicles.

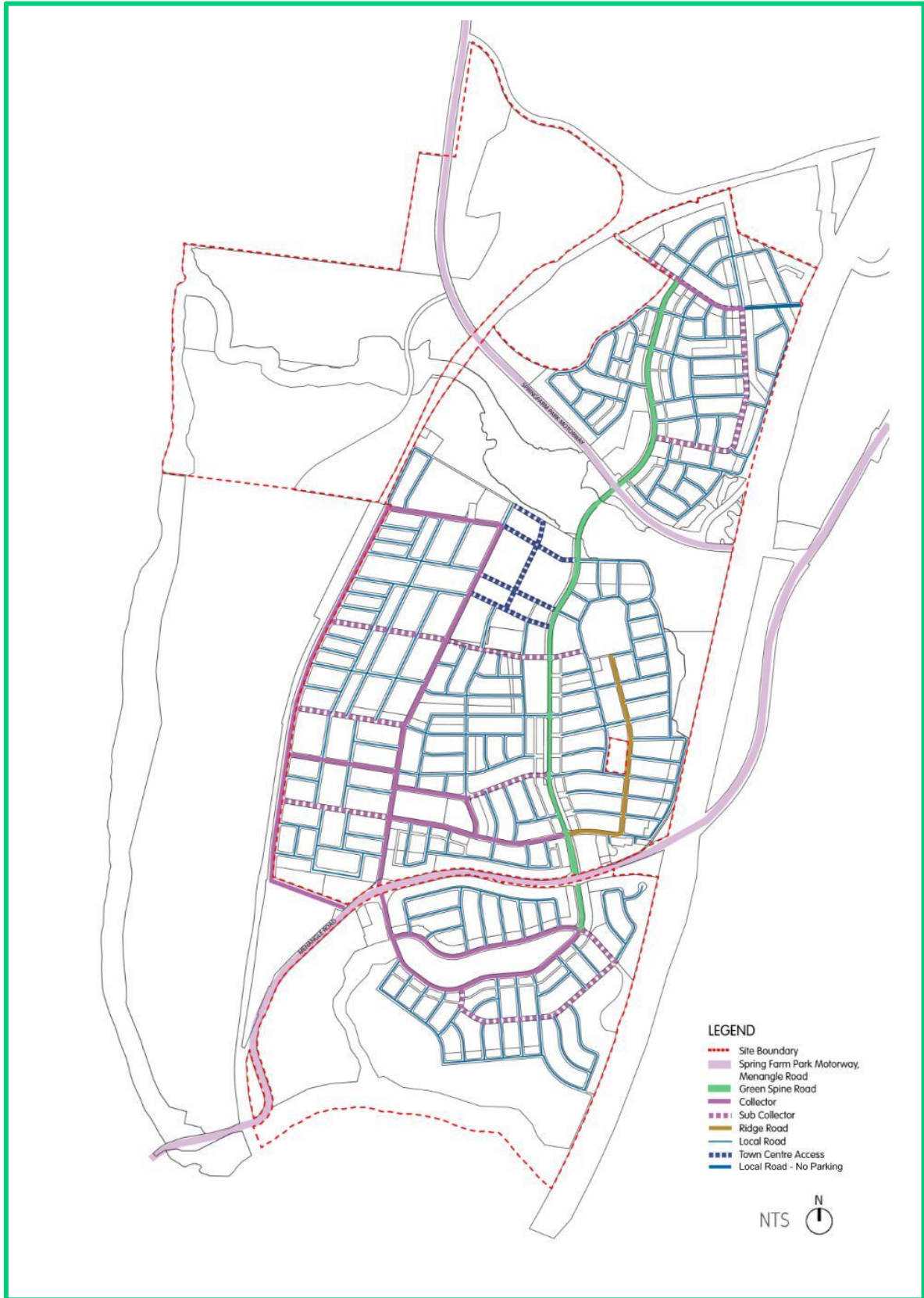
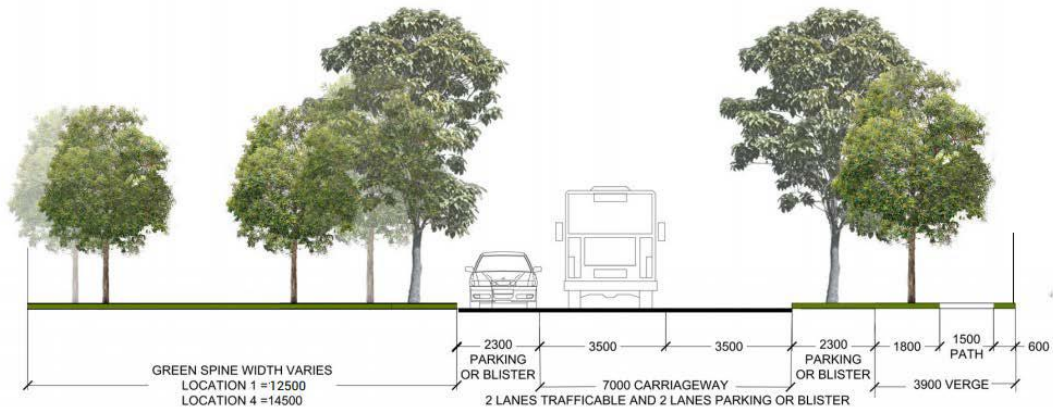
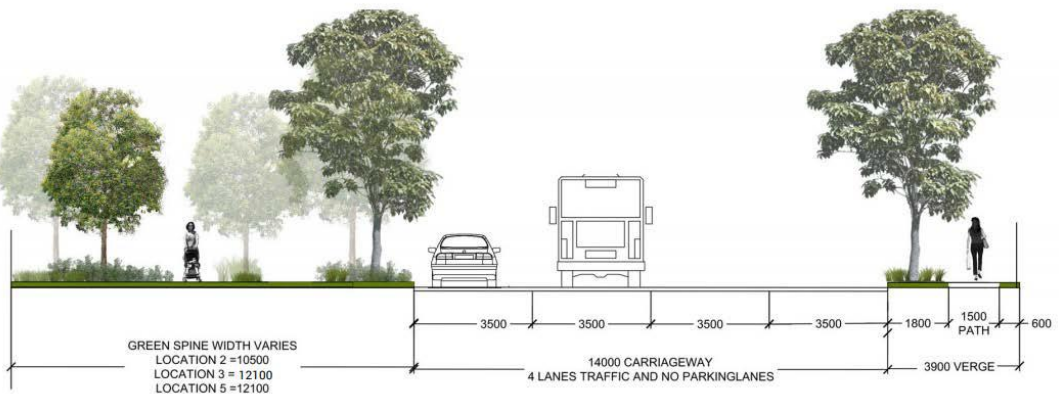


Figure 4.1 Menangle Park Road Hierarchy



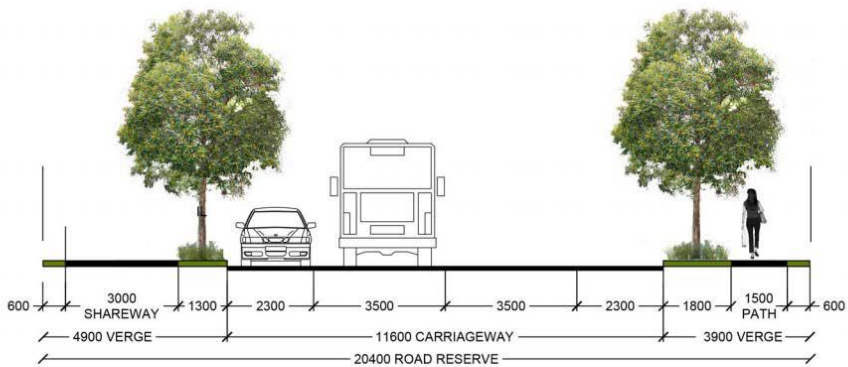
Green Spine - North South Link (2 traffic lanes and 2 parking lanes with planting blisters)

Figure 4.2 Green Spine North South Section



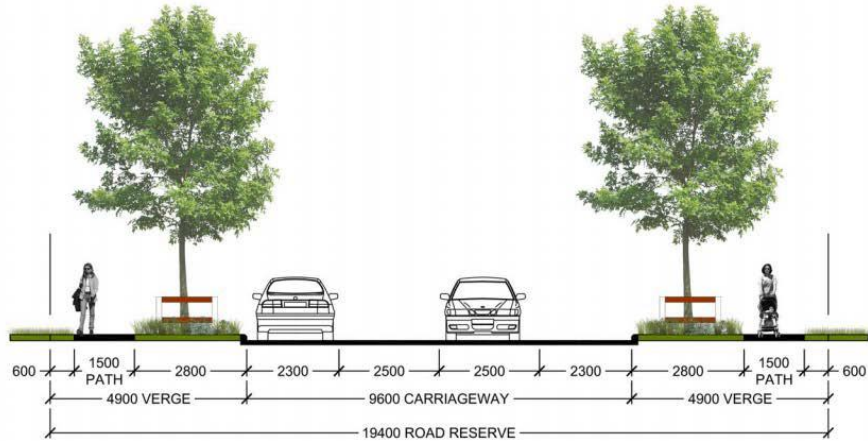
Green Spine - North South Link (4 traffic lanes)

Figure 4.3 Green Spine North South Section



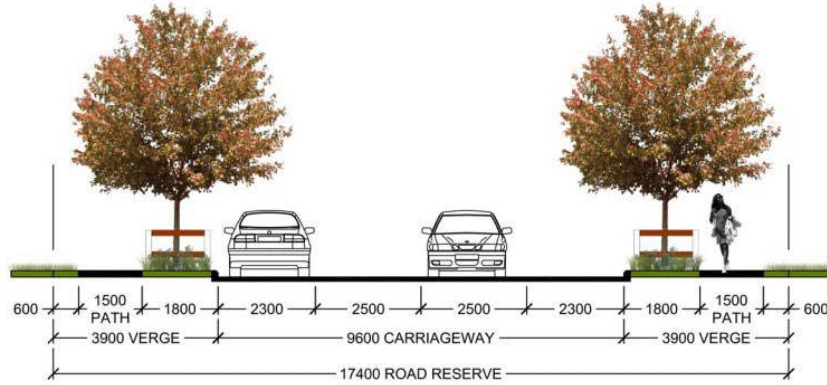
Collector road (20.4m)

Figure 4.4 Collector Road Section



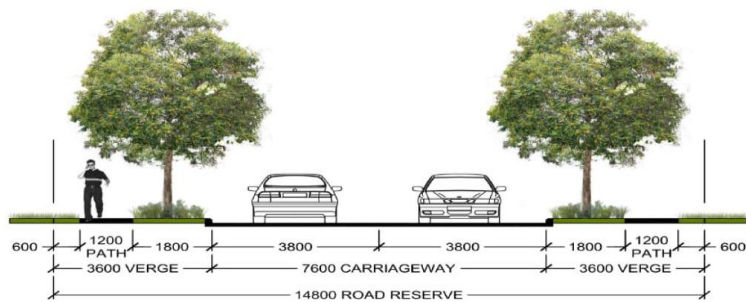
Ridge-top road (19.4m)

Figure 4.5 Ridge Top Road Section



Sub collector road (17.4m)

Figure 4.6 Sub Collector Road Section



Local Road (14.8m)

Figure 4.7 Local Road Section

4.2.2. Green Spine

The Green Spine is a key structural component of Menangle Park and will provide for an exemplary north-south active travel corridor that prioritises recreational open space and permeable mobility. The Green Spine will connect pedestrians and cyclists with approximately 80% of the entire open space network within Menangle Park and will provide opportunities for recreation, social interaction, urban cooling and opportunities for water sensitive urban design.

Objectives

- a. To provide a north-south collector allowing for safe vehicle, cyclist and pedestrian movements.
- b. To unlock mobility options that promote active transport and healthy outcomes.
- c. To provide for recreation opportunities and promote social interactions.
- d. To provide tree planting that enhances urban canopy cover and mitigates urban heat island effects.
- e. To minimise dead-ends and promote street permeability that prioritise pedestrian movement.

Controls

1. The design and construction of the Green Spine is to be delivered generally in accordance with Figure 4.8.
2. Dwellings fronting the Green Spine should have front doors and letterboxes oriented to the public domain to increase street activation and encourage passive surveillance.
3. Pedestrian crossings are to be provided in the form of signalised pedestrian crossings, raised thresholds intersections and wombat crossings.
4. Through-site links which connect parallel residential streets to the Green Spine are to be provided in accordance with Figure 4.8 to promote street permeability.
5. The design of the Green Spine is to maximise opportunities for street furniture, passive and active recreation and social interaction.



Figure 4.8 Green Spine Concept Plan



Figure 4.9.1 Green Spine Plan 1



Figure 4.10.2 Green Spine Section 1

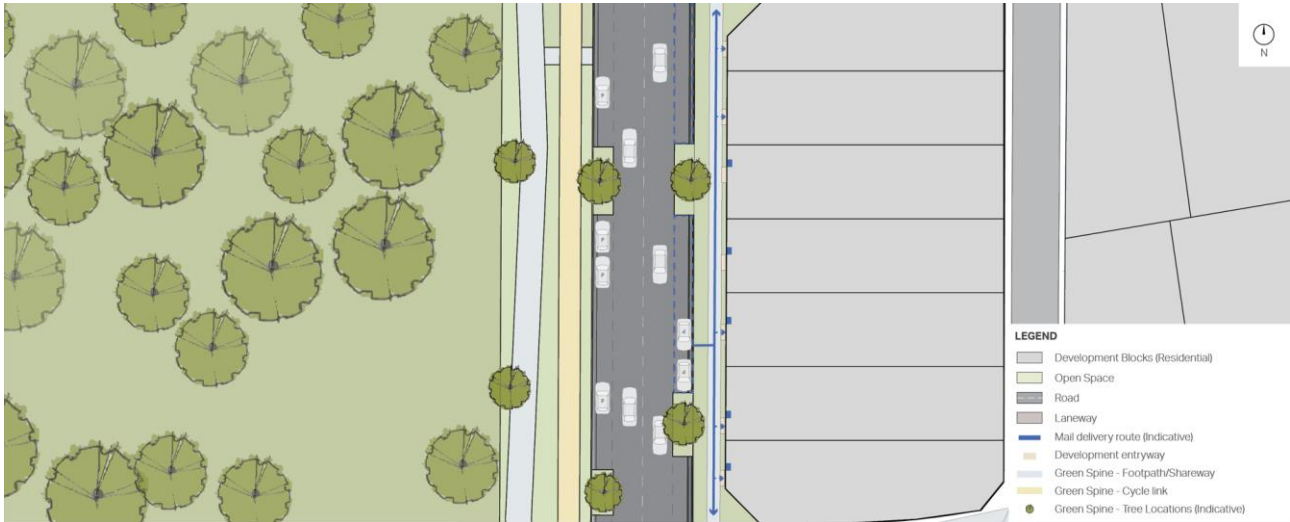


Figure 4.11.3 Green Spine Plan 2

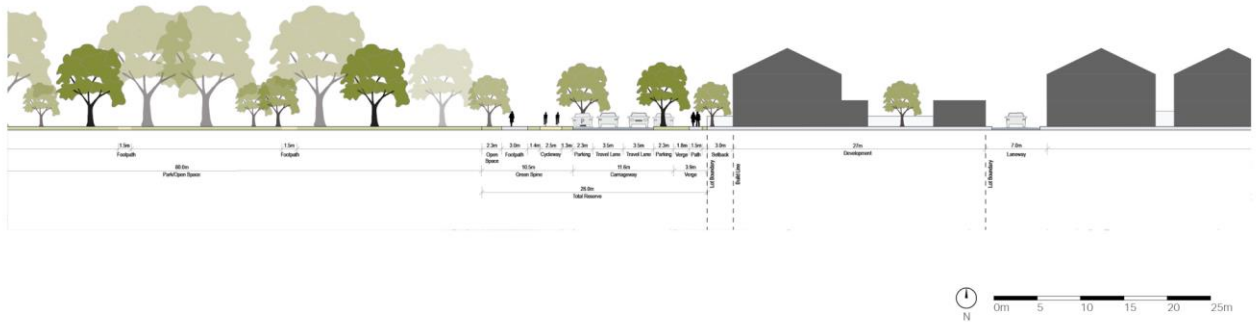


Figure 4.12.4 Green Spine Section 2

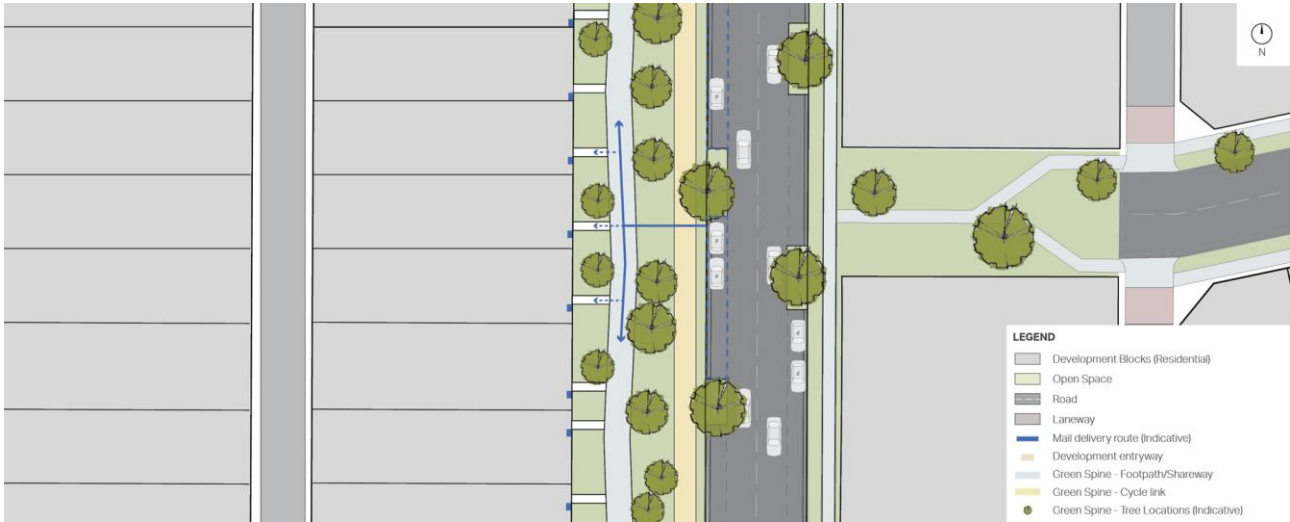


Figure 4.13.5 Green Spine Plan 3

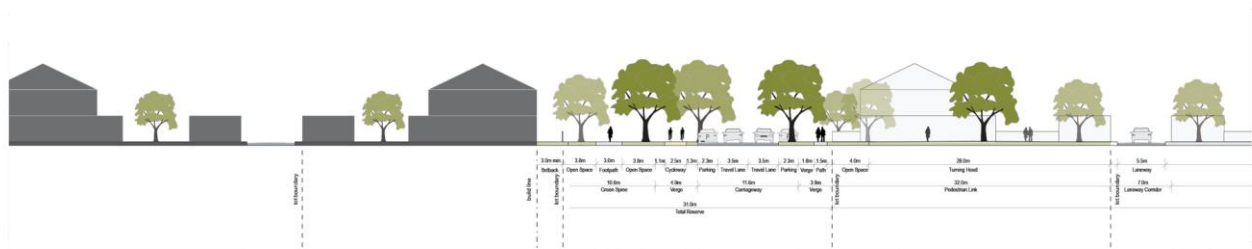


Figure 4.14.6 Green Spine Section 3

- c. To maximise on-street parking spaces and landscaping in residential streets.
- d. To ensure lane ways have sufficient widths to enable garbage collection.
- e. To facilitate the use of attached and narrow lot housing to achieve overall higher neighbourhood densities.
- f. To create a slow speed shared zone requiring co-operative driving practices for the very low volume and frequency of vehicle movements that is distinctly different in character and materials to residential streets.

Controls

1. The design and construction of laneways is to be consistent with Figure 4.9 and 4.10.
2. The design and construction of street splays shall be in accordance with Council's Engineering Design for Development and the relevant part of the SCDCP.
3. The design of circulation roadways shall be in accordance with AS 2890.
4. The splays between two local streets are to have dimensions of 4m by 4m to maintain the residential character.

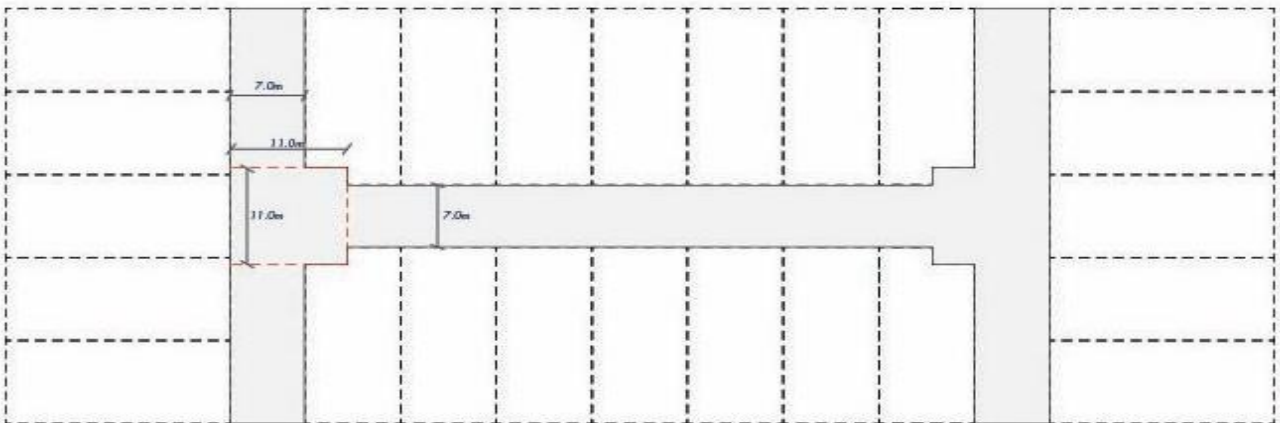


Figure 4.9 Laneway Principles Plan

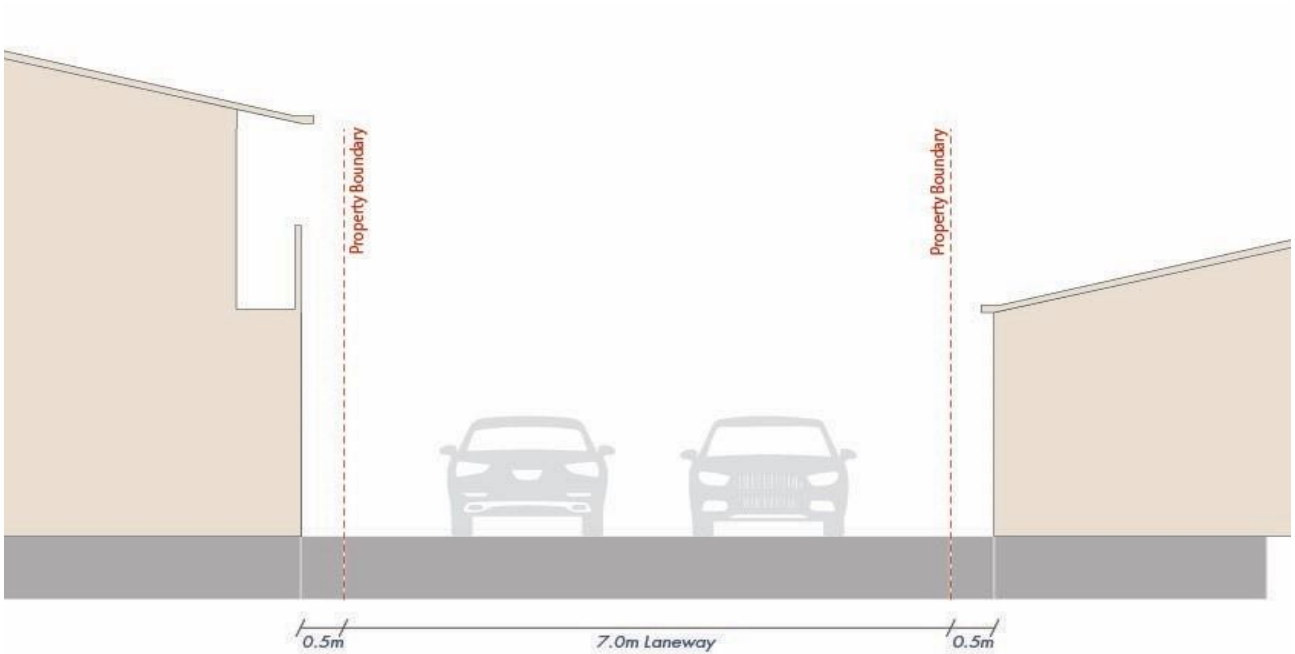


Figure 4.10 Laneway cross section

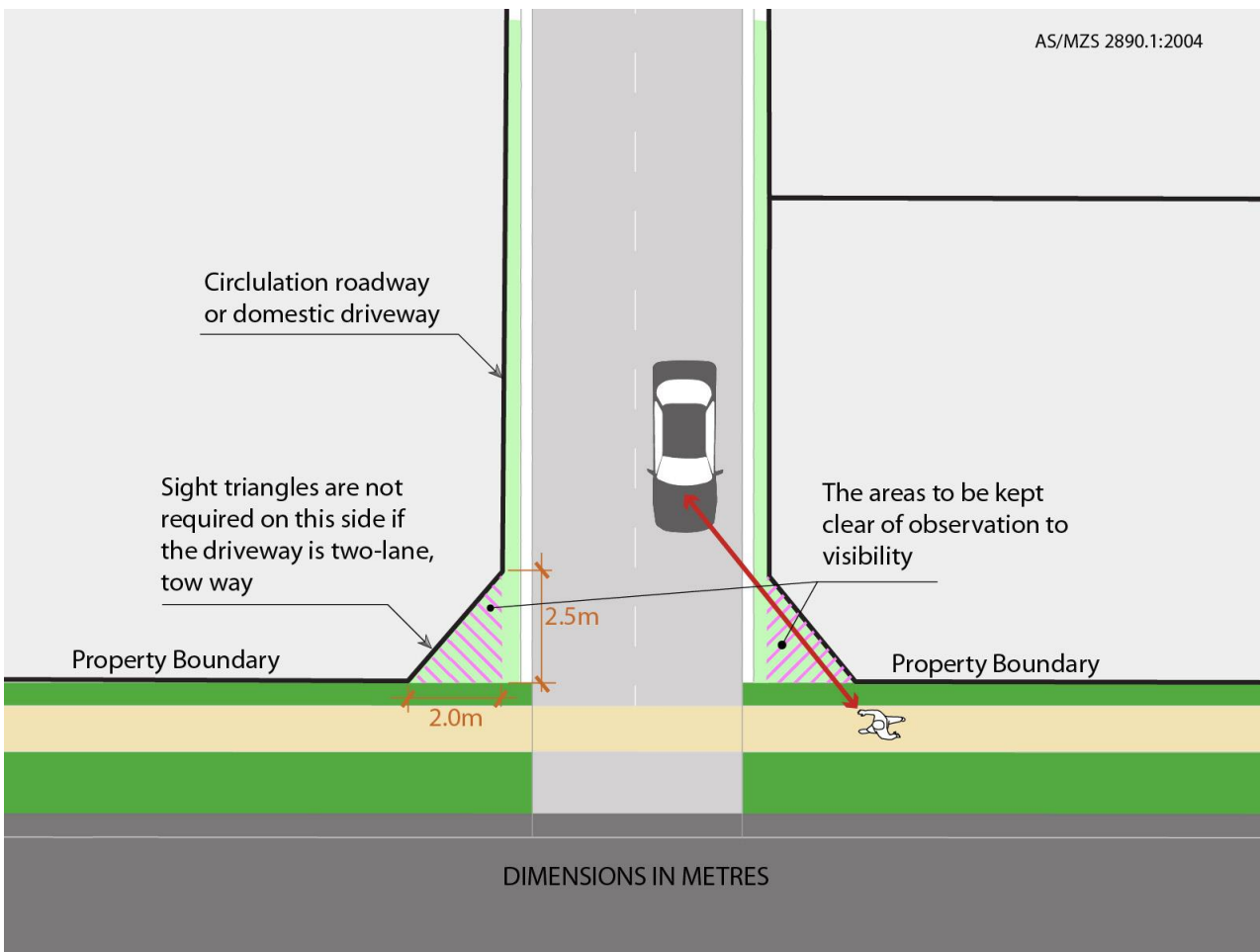


Figure 4.11 Minimum sight lines for pedestrian safety

4.2.4. Pedestrian and Cycle Network

Objectives

- a. To provide a convenient, efficient and safe network of pedestrian and cycle paths within and beyond the site that provides links between all key activities, community facilities, open space areas and the Town Centre.
- b. To create an interconnected pedestrian and cycle network comprising streets and paths that are safe, legible, and comfortable.
- c. To ensure a high level of pedestrian and cycle accessibility and priority to and within the Town Centre.
- d. To encourage cycling and pedestrian manoeuvrability and usage.

Controls

1. Pedestrian and cycle routes should generally be provided in accordance with Figure 4.12. Alternate configurations can be provided subject to consistency with the objectives.
2. Ensure pedestrian and cycle facilities in public spaces are safe, well lit, clearly defined, functional and accessible to all users.
3. Minimum pedestrian footpath width is to be 1.2m.
4. The minimum width of shared cycle / pedestrian paths is to be 2.5m.
5. Pedestrian and cycle paths are to be provided as part of the open space and recreation areas.
6. Where an open space related path exists generally in parallel, and proximate, to a road reserve; the footpath associated with the thoroughfare cross section is no longer required.
7. Design pedestrian and cycle ways and pedestrian refuge islands so that they are fully accessible by all users in terms of access points and gradients, in accordance with AS 1428 (Part 1 to 4 Design for access and mobility).
8. Footpaths take visual priority over laneway and driveway crossovers.
9. Paving units or colour are encouraged to enhance the contrast between carriageway and crossing.
10. Place bicycle racks in clusters clear of pedestrian travel paths and locate share bike parking adjacent to traditional bicycle racks with rack space left free for regular bicycles that need to be locked to a fixed point.

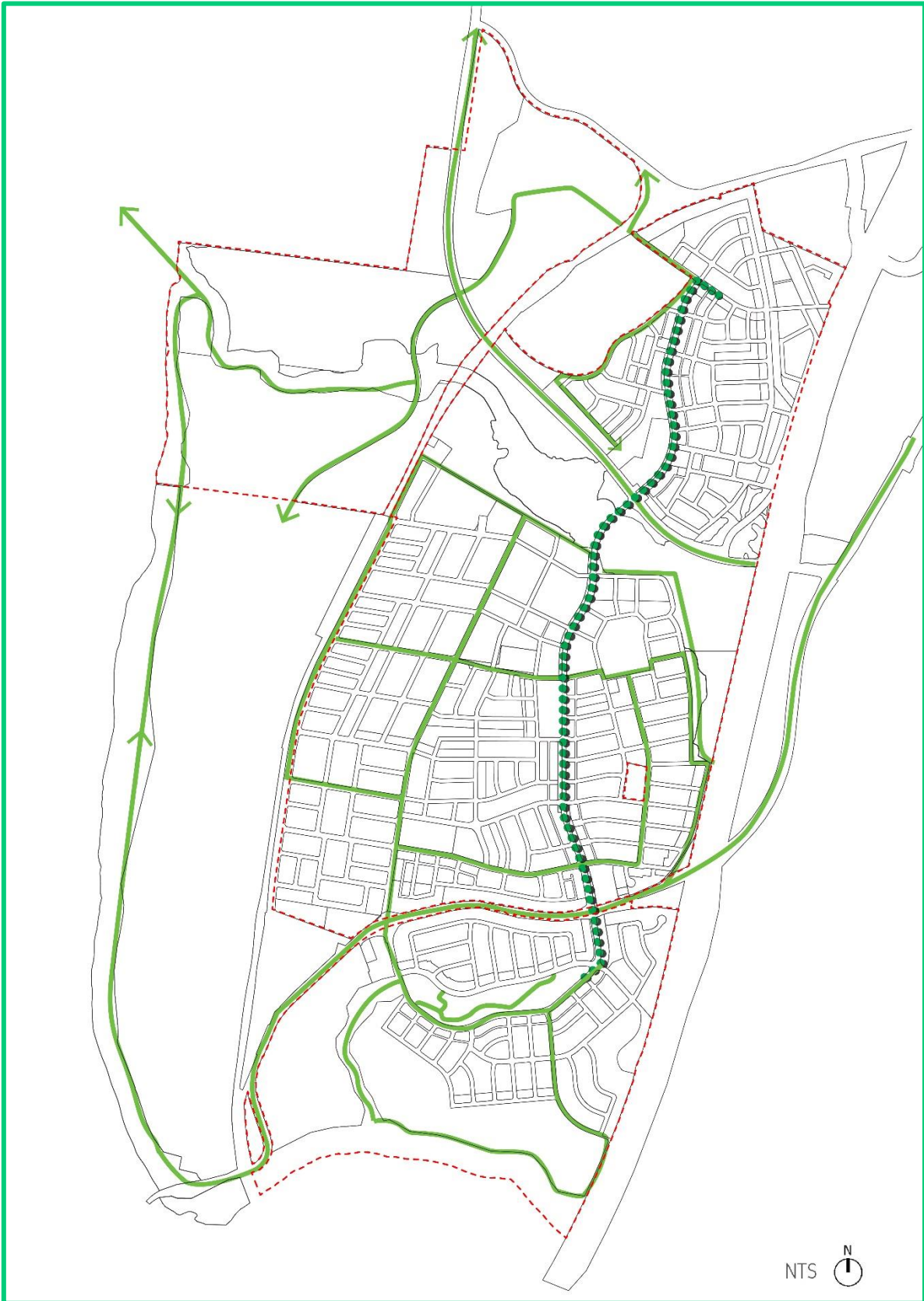


Figure 4.12 Menangle Park Pedestrian and Cycle Network Plan

4.3. Public Domain, Parks and Community Infrastructure

Objectives

- a. Create a network of open spaces, focal points and recreation and community facilities which meet the needs of the future residents and workers of Menangle Park.
- b. To provide places and spaces that are accessible to all which accommodate a range of activities for residents and visitors.
- c. To establish open spaces that promote local character, place making and identify as an interconnected network of open space including parks, squares and streets.
- d. To incorporate environmentally sensitive areas such as riparian land, bushland and archaeologically sensitive sites into the open space network and provides appropriate protection and management mechanisms.
- e. To ensure that public domain elements such as street trees, paving, street furniture, lighting and signage contribute to a consistent street character.
- f. Create a living and working environment that promotes health, well-being, active living and sociability;
- g. Optimise access and connectivity to all public open spaces, with a focus on walkability and cycle network
- h. Increase urban tree canopy through the provision of connected high quality landscaped active and passive open space, riparian corridor and tree lined streets.
- i. Incorporate water sensitive urban design and other sustainable development practices in the creation of the public domain.

Controls

1. The open space network for Menangle Park is to be provided in accordance with Figure 4.13.
2. The open space network shall be connected via a network of pedestrian and cycle links focused along the riparian corridors as per Figure 4.12.
3. Street trees throughout Menangle Park are to be delivered in accordance with the Menangle Park Street Tree Plan at Figure 4.14.
4. A development application for subdivision incorporating open space is to be accompanied by a landscape plan where the park is to be constructed as 'works in kind'.
5. Perimeter streets are generally to be provided on 2-3 sides of an open space unless:
 - a. A street frontage is not provided the development must front the park to provide surveillance.
6. Incorporate public art in open space areas. Where appropriate, artwork should serve a dual role (e.g. as play equipment for children, informal seating, or a marker for a meeting place).
7. Riparian corridors and conservation areas are to provide opportunities for pedestrian and cycle ways, fitness trails and additional open space in a manner that maintains the environmental significance of these areas.

A range of themed elements such as boardwalks, eco-pathways, and educational tracks should be utilised in appropriate locations (i.e. within the riparian corridor buffer).

8. Where parks are to incorporate Aboriginal or European cultural heritage items, a public art strategy is to be submitted to ensure they are sensitively designed in accordance with the following provisions:
 - ▶ For Aboriginal Heritage, areas identified in Figure 3.6 of this DCP.
 - ▶ For European Cultural Heritage, the Conservation Management Plan, Interpretation Plan and Vegetation Management Plan as described in Section 3.12 of this DCP.
 - ▶ All new plantings shall be in accordance with Council's Prescribed Trees and Preferred Species list contained in Appendix C of this DCP.
 - ▶ Landscape materials and design should respond to an identified planting palette.
 - ▶ Street furniture, lighting, paving etc. should be contemporary and reflect the local environmental character of the Precinct as well as interpretation initiatives (where appropriate).
 - ▶ The 'Silos' of Menangle Park are to be interpreted into the Public Domain with consideration for adaptive conceptual reuse.
9. A street tree planting plan is required to be submitted with development applications for subdivisions.
10. Street trees will be required to be planted at the time of subdivision construction unless bonded to ensure dwelling construction does not impact street trees.
11. Street tree planting is to be provided to all streets with a spacing of between 7 and 10 metres, with a minimum of one tree per lot frontage. Corner lots will have a minimum of two street trees and normally three trees. The location of street trees must complement proposed driveway locations.
12. A report prepared by a suitably qualified Arborist with an AQF 5 level accreditation shall be provided with any development application detailing measures to be taken to ensure tree protection during construction.
13. Demonstrate the potential to double the existing (incl. proposed) canopy coverage over public landscaped areas (including street trees) from planting within 15 years from the completion of development.
14. A wayfinding signage strategy is to be provided to guide the provisions of wayfinding signage for relevant development within Menangle Park. This strategy will relate to DAs for open spaces, green links, community hubs and the like, and is to consider:
 - a. Identification of locations within a building or external space,
 - b. Key places along a journey, including green links, arrival points, and destinations,
 - c. Passive and public transportation,
 - d. Opportunities to embed and enrich journeys and destinations with cultural meanings (i.e. Aboriginal languages, places of significance and stories).
15. The following principles are to be taken into consideration in the location of public parks:

- a. Parks are to be located as focal points within the residential neighbourhoods. All dwellings are to be located within 400m from a public park.
- b. Parks should be located within close proximity to community and education facilities and be highly accessible and linked by pedestrian and cycling networks.
- c. Parks should be located and designed to accommodate remnant vegetation and where appropriate, should be linked to and integrated with riparian corridors, and
- d. Should be bordered generally, by streets on all sides with houses orientated towards them for surveillance.

16. The detailed design of public parks is to consider:

- a. The need for a range of play spaces and opportunities and cater for a range of ages.
- b. The provisions of adequate parking, lighting and waste management facilities,
- c. The inclusion of interpretive signage detailing local history, Aboriginal cultural values, environmental education themes and the like,
- d. The provision of amenities such as seating and shade structures, drinking fountains, street lighting, street and information signs, planter boxes, feature fencing and the like.
- e. CPTED Strategy which includes – security cameras at key locations with parks to ensure coverage of primary movement and play zones.
- f. Technology and tools to construct and operate new innovative infrastructure more efficiently and sustainably. Including the supply and installation of the Smart Lighting Network to Council's specifications.

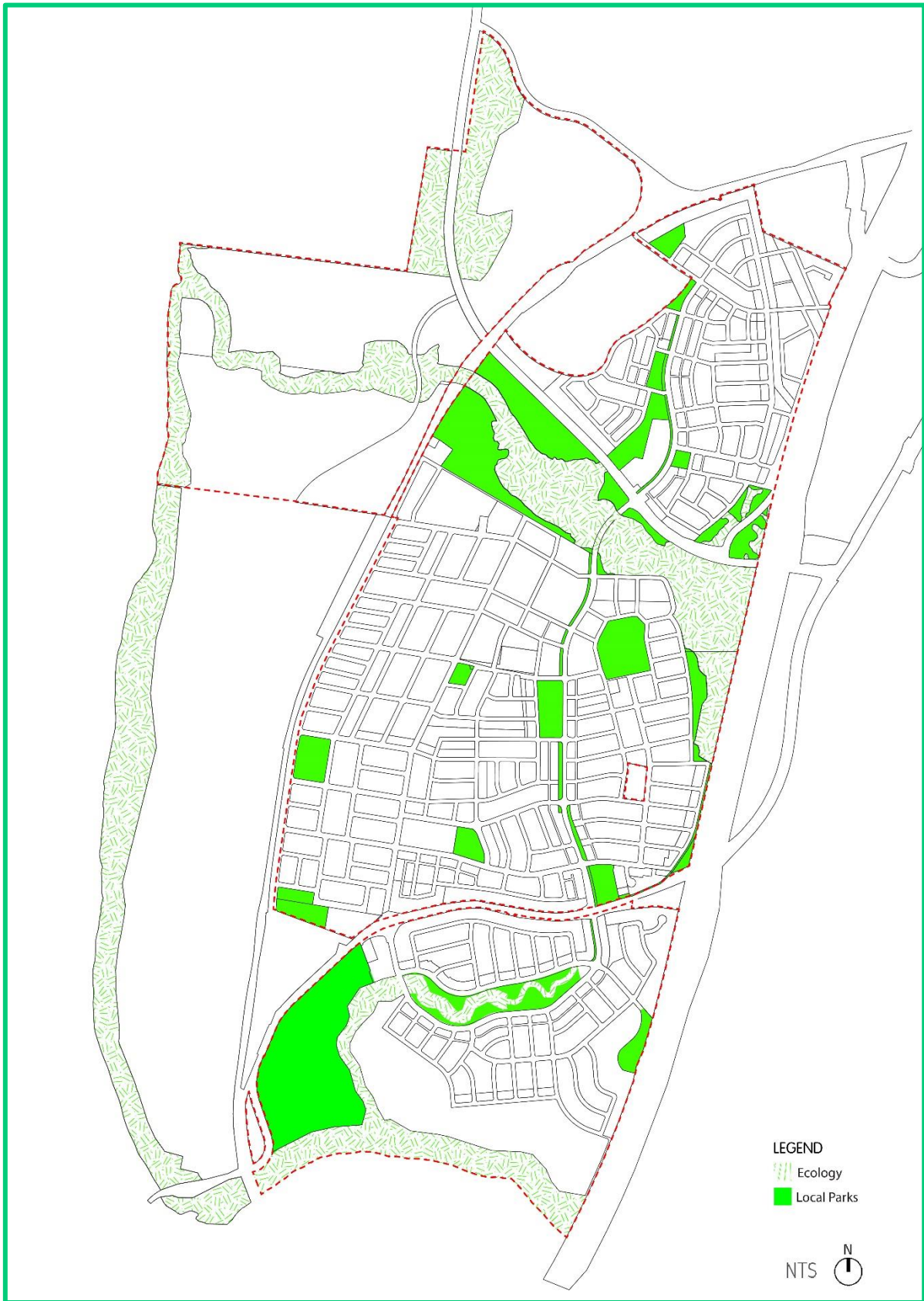
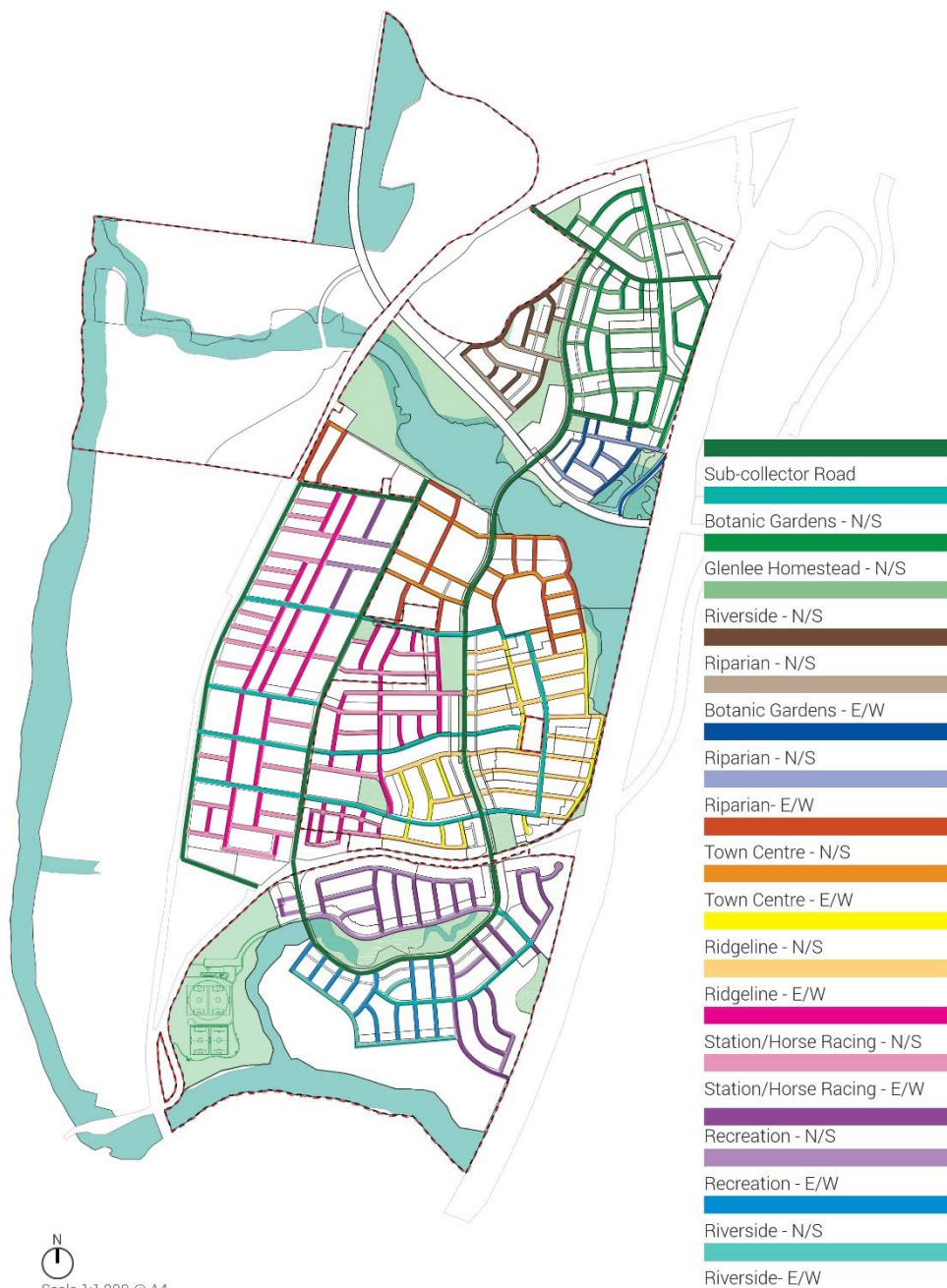


Figure 4.13 Menangle Park Open Space Network

Open Space Plan | 2024 Street Tree Plan



2 Menangle Park Open Space Tree Strategy Plan
Prepared for DAHUA Group

Place Design Group
March 2024



Figure 4.14 Menangle Park Street Tree Plan

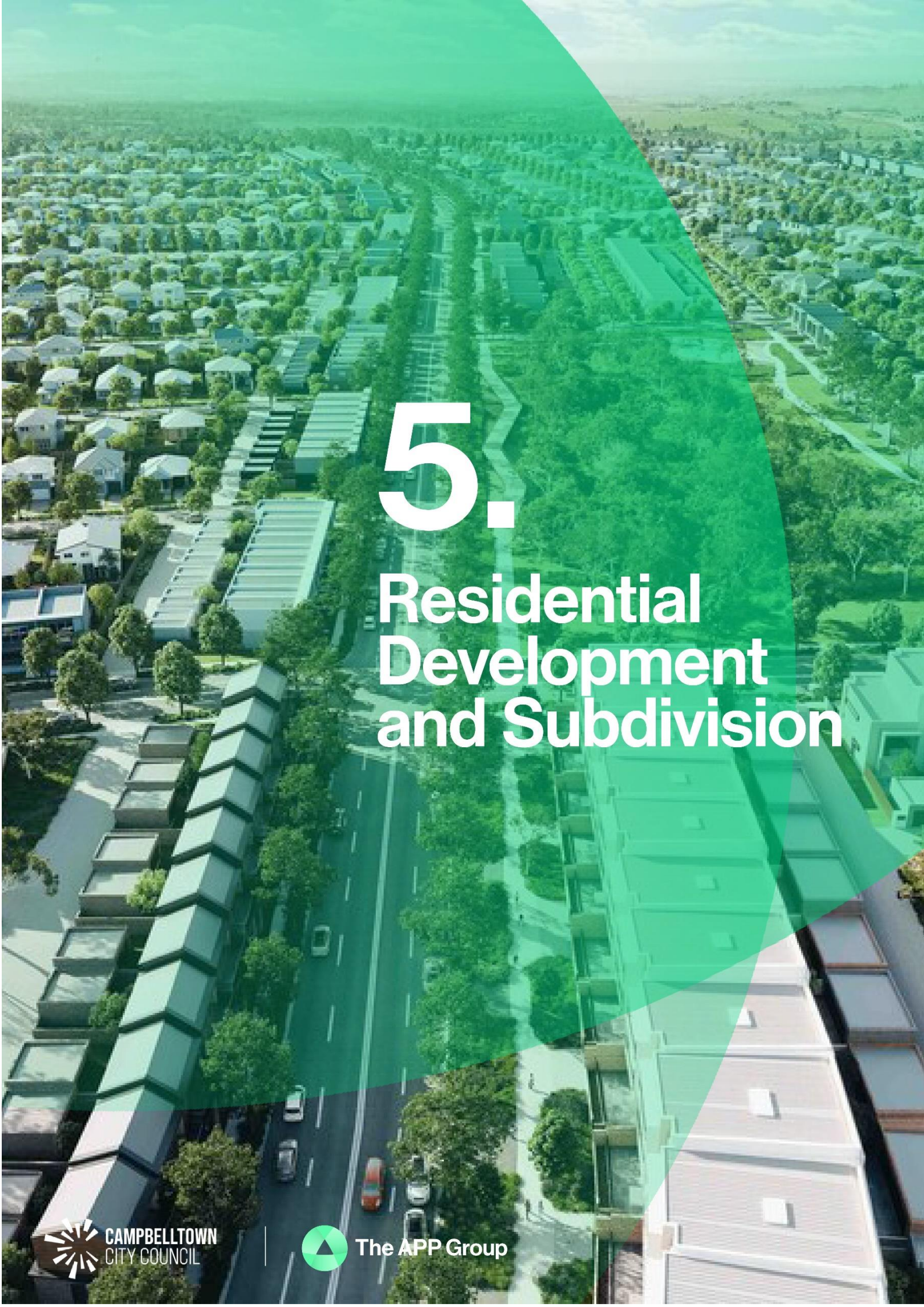
4.4. Crime Prevention through Environmental Design

Objectives

- a. To ensure that the siting and design of buildings and spaces, through casual surveillance, decreases opportunities for crime.
- b. To ensure that development encourages people to use streets, parks and other public places without fear of personal risk.
- c. To ensure the design of publicly accessible areas (e.g. paths etc) encourages a sense of community ownership of open and public space.

Controls

1. Buildings should be designed to overlook streets, lanes and other public or communal areas to provide casual surveillance. Habitable windows, in location and quantity, are to be orientated to overlook the primary and secondary street frontages.
2. The design of all development, in particular, the public domain and community facilities, is to enhance public surveillance of public streets and open space/conservation areas.
3. For residential development, the use of roller shutters other than garages are not permitted on doors and windows facing the street. Any security railings must be designed to complement the architecture of the building.
4. Developments are to avoid creating areas for concealment and blank walls facing streets.
5. 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.
6. 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 minimizing 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.
7. All developments are to incorporate the principles of Crime Prevention through Environmental Design (CPTED). Development applications for subdivision, public open space and community facilities are to include a formal crime risk (CPTED) assessment.



5.

Residential Development and Subdivision

5. Residential Development and Subdivision

5.1. Residential Density

Objectives

- a. To provide guidance to Applicants on the appropriate mix of housing types and appropriate locations for certain housing types.
- b. To establish the desired character of the residential areas.
- c. To promote housing diversity and affordability.

Controls

1. Developments are to demonstrate consistency with the yields specified in the Residential Density Map in Figure 5.1.
2. All applications for residential subdivision and the construction of residential buildings are to demonstrate densities compliant with the relevant Density Band / Housing Area in Table 5.1 and Section 5.1
3. Residential development is to be consistent the 'typical characteristics' of the corresponding Density Band / Housing Area in Table 5.1 below.

Table 5.1 Housing Character / Density

Net Residential Density dw/Ha	Housing Area (Zone)	Typical Characteristics per Housing Area
>5 dw/ HA	RU2 Rural Landscape C4 Environmental Living	<ul style="list-style-type: none"> ▶ Located on the edges of the precinct. ▶ Detached dwellings. ▶ Predominantly single storey in height with detached garages and outbuildings. ▶ Dwellings designed to respond to key environmental opportunities and constraints of lots. ▶ Development to retain protected biodiversity values and significant trees in lots. ▶ Development to be designed to respect and preserve rural scenic qualities of the landscape.
10-15 dw/ Ha	R5 Large Lot Residential	<ul style="list-style-type: none"> ▶ Generally located at the outer fringes of the low density residential areas. ▶ Predominantly detached dwelling houses on larger lots with some semi-detached dwellings and secondary dwellings. ▶ Single and double storey dwellings. ▶ Mainly garden suburban and suburban streetscapes.

Net Residential Density dw/Ha	Housing Area (Zone)	Typical Characteristics per Housing Area
15-25 dw/ Ha	R2 Low Density Residential	<ul style="list-style-type: none"> ▶ Predominantly a mix of detached dwelling houses, semi-detached dwellings and dual occupancies with some secondary dwellings. ▶ Focused areas of smaller lot dwelling houses (between 375-420sqm) in high amenity locations. ▶ Single and double storey dwellings. ▶ Diverse suburban streetscape.
25-35 dw/ Ha	R3 Medium Density Residential	<ul style="list-style-type: none"> ▶ Generally located within the walking catchment of centres, corridors and public transport. ▶ Consists of predominantly dwelling houses on small lots, attached and multi-dwelling housing developments located close to neighbourhood centres, open space and public transport. ▶ Typically rear-loaded double storey dwellings with some single and three-storey dwellings. ▶ Incorporates laneways and shared driveways. ▶ Designed to provide activation of the public domain, including streets and public open space through the orientation and design of buildings and communal spaces. ▶ Mainly urban streetscape typology.
35+ dw/ Ha	R4 High Density Residential E1 Local Centre	<ul style="list-style-type: none"> ▶ Generally located immediately adjacent centres and / or public transport nodes. ▶ Consists of predominantly residential flat buildings and shop top housing. ▶ Manor homes attached and multi-dwelling housing. ▶ Generally double and multi-storey buildings ▶ Predominantly urban streetscapes with minimal front setback; incorporates laneways and shared driveways.

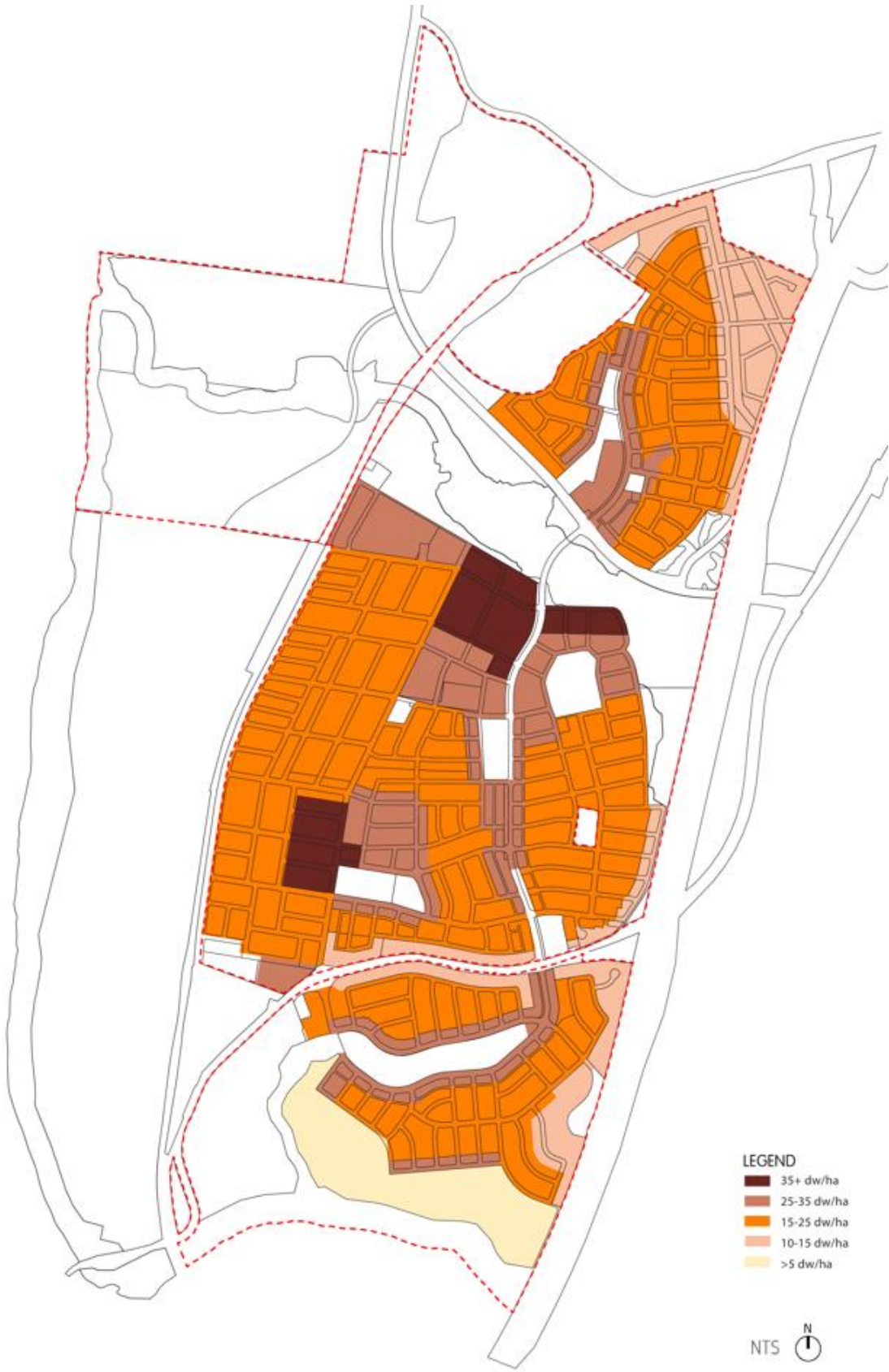


Figure 5.1 Residential Density Map



Figure 5.2 15-25 Dwelling / Hectare (R2 Low Density)



Figure 5.3 25-35 Dwelling / Hectare (R3 Medium Density)



Figure 5.4 35 Dwellings / Hectare (R4 High Density) (illustrative purposes only – not to be taken as a control)

5.2. Block and Lot Layout

Objectives

- a. To establish a clear urban structure that promotes a ‘sense of neighbourhood’ and encourages walking and cycling.
- b. To efficiently utilise land and achieve the target dwelling yields.
- c. To minimise cut and fill; promoting a sustainable development and attractive streetscape.
- d. To optimise outlook and proximity to public and community facilities, parks and public transport with increased residential density.
- e. To encourage variety in dwelling size, type and design to promote housing choice and create attractive streetscapes with distinctive characters.
- f. To accommodate a mix of lot sizes and dwelling types across a precinct.
- g. To establish minimum lot dimensions for different residential dwelling types.
- h. To ensure that all residential lots achieve an appropriate level of amenity.
- i. To optimise the number of lots in areas with the greatest public open space and landscaped amenity balanced with diversity and equitable access to housing choice.

5.2.1. Block Layout

1. All block and lot layouts are to be generally consistent with the ILP.
2. Subdivision design and lot configuration for lots fronting streets is to demonstrate:
 - ▶ Suitable orientation to provide street address, activation and surveillance;
 - ▶ Appropriate interface (front to front and rear to rear housing)
 - ▶ Suitable access arrangements;
 - ▶ Adequate setback arrangements; and
 - ▶ Appropriate acoustic amenity
3. Street block lengths should be a maximum of 250m and broken up using the above thoroughfare types to ensure permeability.
4. Street block and subdivision design is to optimise solar orientation, taking into account other factors such as open space location, views and topography. Optimise the number of east-west orientated lots in medium density areas.
5. Utilise laneways to provide rear-loaded access in medium density housing areas. Laneways are to be designed as share ways to promote pedestrian and cycle safety.
6. Optimise secondary streets for garage access to corner lots.
7. Locate garages on the lower southern side wherever possible.

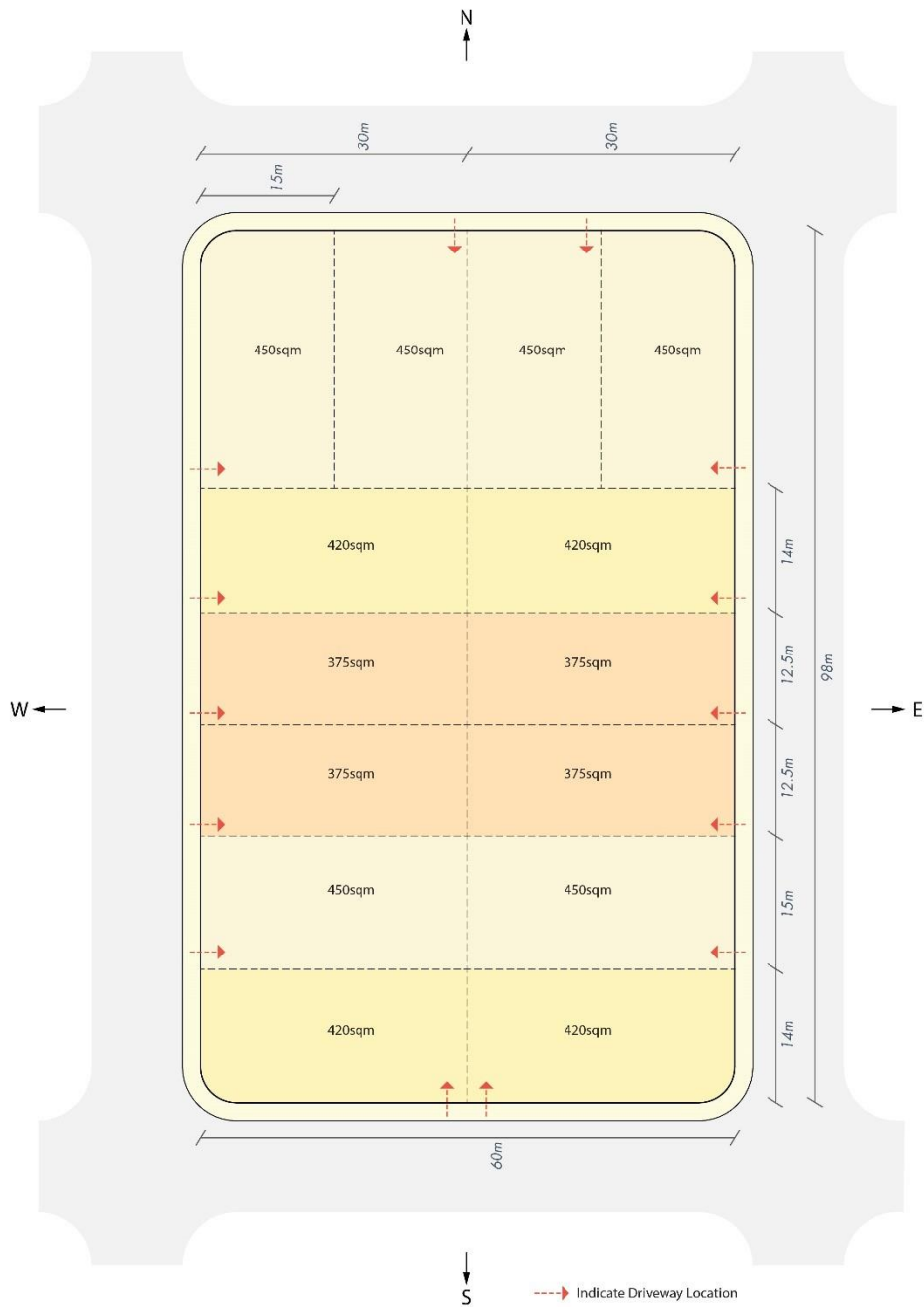


Figure 5.5 Block layout principles East-West orientation (Low Density Residential)

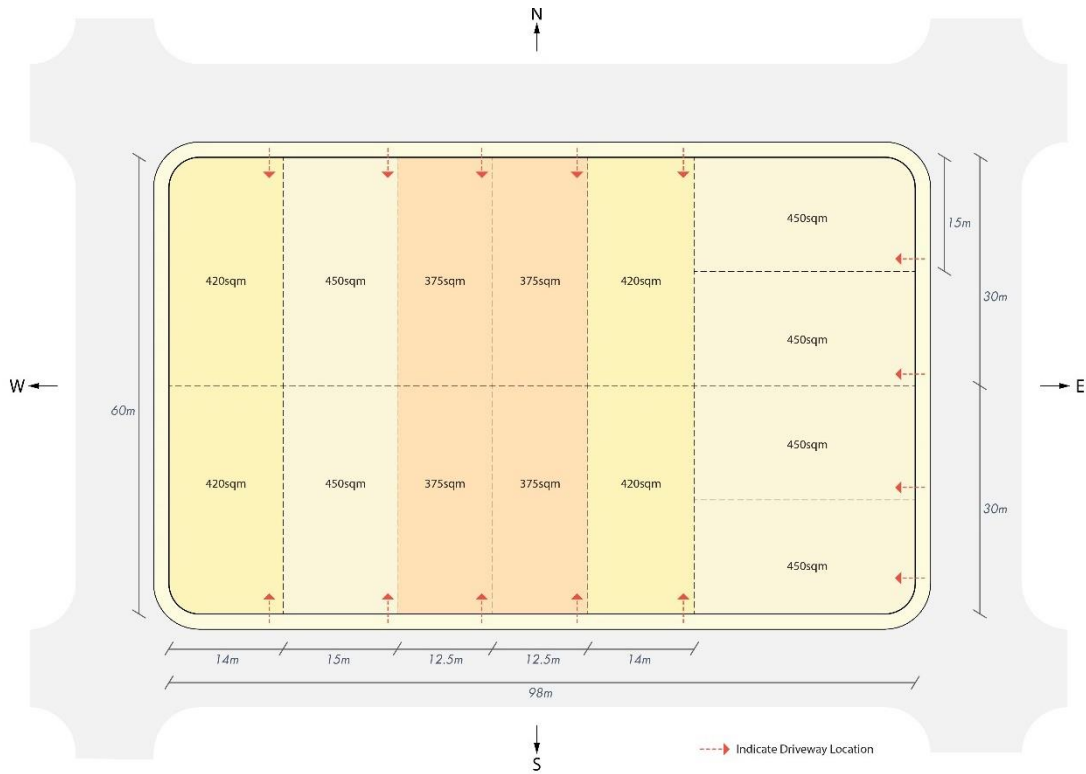


Figure 5.6 Block layout principles North South orientation (Low Density Residential)

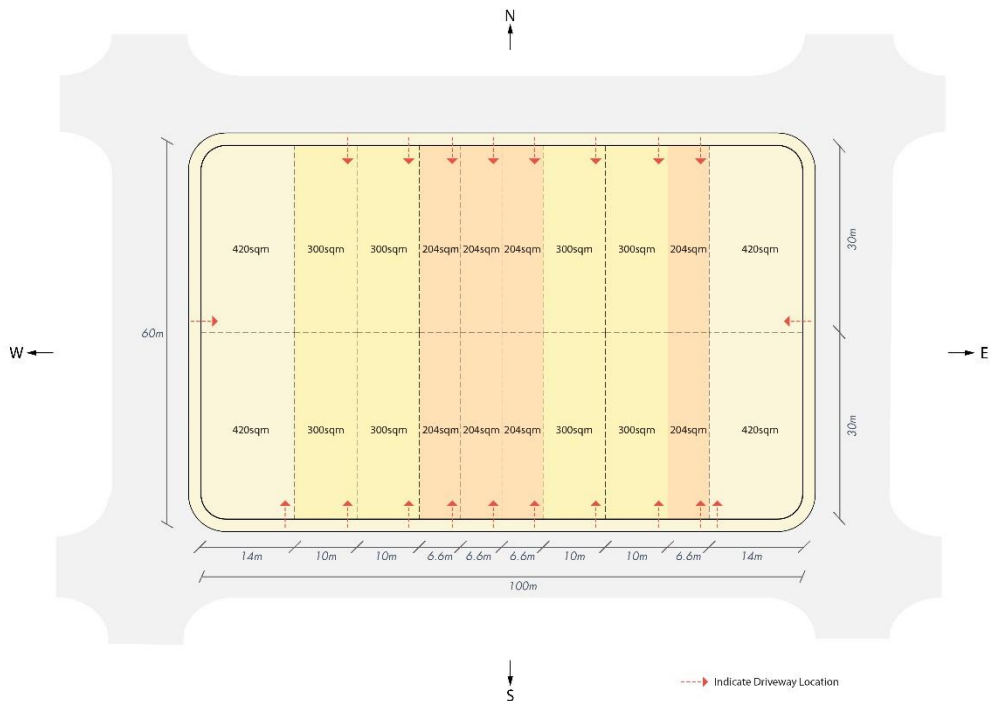


Figure 5.7 Block layout principles orientation (Medium Density Residential)

5.2.2. Lot Layout

1. A range of residential lot types (area, frontage, depth, zero lot and access) must be provided to ensure a mix of housing types and dwelling sizes across both the R2 and R3 zones.
2. Lots should be rectangular and/ or demonstrate a viable rectangular building siting footprint exists within the irregular shaped lot. Where lots are an irregular shape, they are to be large enough and oriented to enable dwellings to meet the controls in this DCP.
3. Preferred block orientation is established by the road layout on the ILP. Optimal lot orientation is east-west, or north-south where the road pattern requires. Exceptions to the preferred lot orientation may be considered where factors such as the layout of existing roads and cadastral boundaries, or topography and drainage lines, prevent achievement of the preferred orientation.
4. Lot depths in the low density areas are to be generally between 25m-35m depending on orientation and garage location.
5. Lot depths in the medium density housing areas is typically 20-30m.
6. Minimum Lot widths are to comply with Table 5.2:

Table 5.2 Minimum Lot Frontages

Zone	Minimum Lot Width
R2	11.5m
R3 (Rear Loaded Lots)	6.5m
R3 (Front Loaded Lots)	8.0m
R5	15m
RU2 and C4	15m

7. No more than 6 x 200sqm contiguous lots (accommodating Attached Dwellings) are permitted in the R3 zone. Contiguous lots are to be broken up by a minimum of three larger lots of 375sqm or greater.
8. Continuous long runs of front loaded narrow lots (i.e. less than 8m) are to be avoided in all Housing Areas.

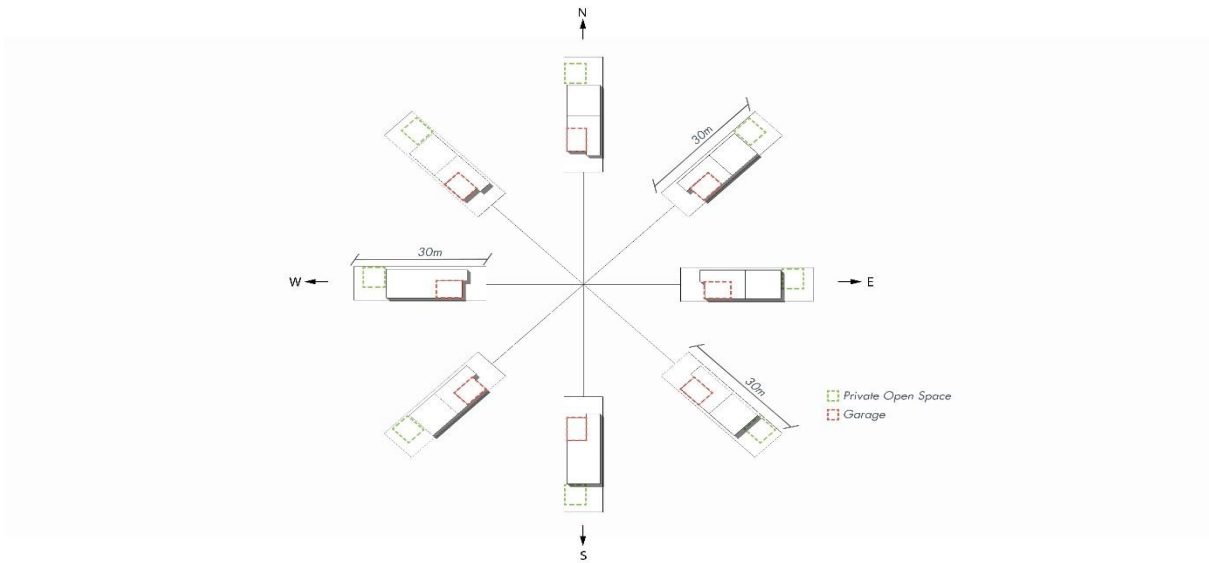


Figure 5.8 Lot Layout Principles

5.2.3. Battle-Axe Lots

1. Principles for the location of battle-axe lots are illustrated at Figure 5.9.
2. All residential allotments are to have direct frontage to a public road. Battle-axe and right of carriageways will only be considered if no other options are available, and an appropriate development outcome can be achieved.
3. Subdivision layout should minimise the use of battle-axe lots without public frontage to resolve residual land issues.
4. Battle axe lots are to provide a building envelope which demonstrates compliance with provisions for solar access, private open space, setbacks and site coverage of this DCP, and to show adequate distance from existing or proposed dwellings to ensure privacy and amenity is achievable.
5. Battle-axe allotments are to:
 - a. Have a minimum site area of 420m² (excluding the handle),
 - b. only permit a detached dwelling house,
 - c. have a minimum access handle width of 3.5m,
 - d. provide 500mm landscaping verge on each side of the access handle. This is to be provided within the required 3.5m wide access handle.
 - e. have a minimum 3m x 3m splay at the dwelling end of access handle,
 - f. Have a maximum battle-axe handle length of 50m, and
 - g. Provide a driveway design that is in accordance with Council's specifications.

6. Battle-axes are to comply with the requirements under section 5.2 Dwelling Design Controls, however, the garage can utilise the side setback control, while the remainder of the house must be setback as per the rear setback control.
7. Applicants must demonstrate that a vehicle can leave the allotment in a forward direction without impacting the amenity of the front setback, or private open space. Pervious material will not be supported within the front setback to cater for vehicle manoeuvring.
8. Where battle-axe lots front open space or road, development is to be designed to a dual frontage form, whereby the rear setback is facing the handle.
9. Shared access handles are to be 6m in width and service no more than 2 lots, stacked battle allotments are not permitted. Shared access handles must also provide 500mm of landscaping on either side.

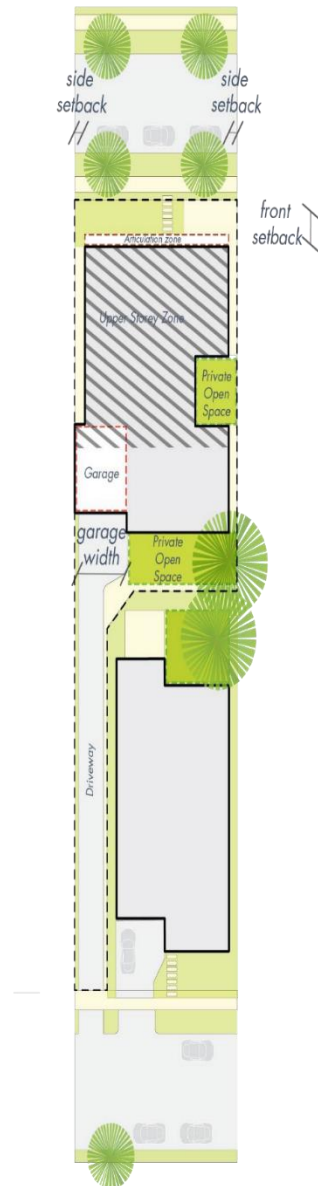
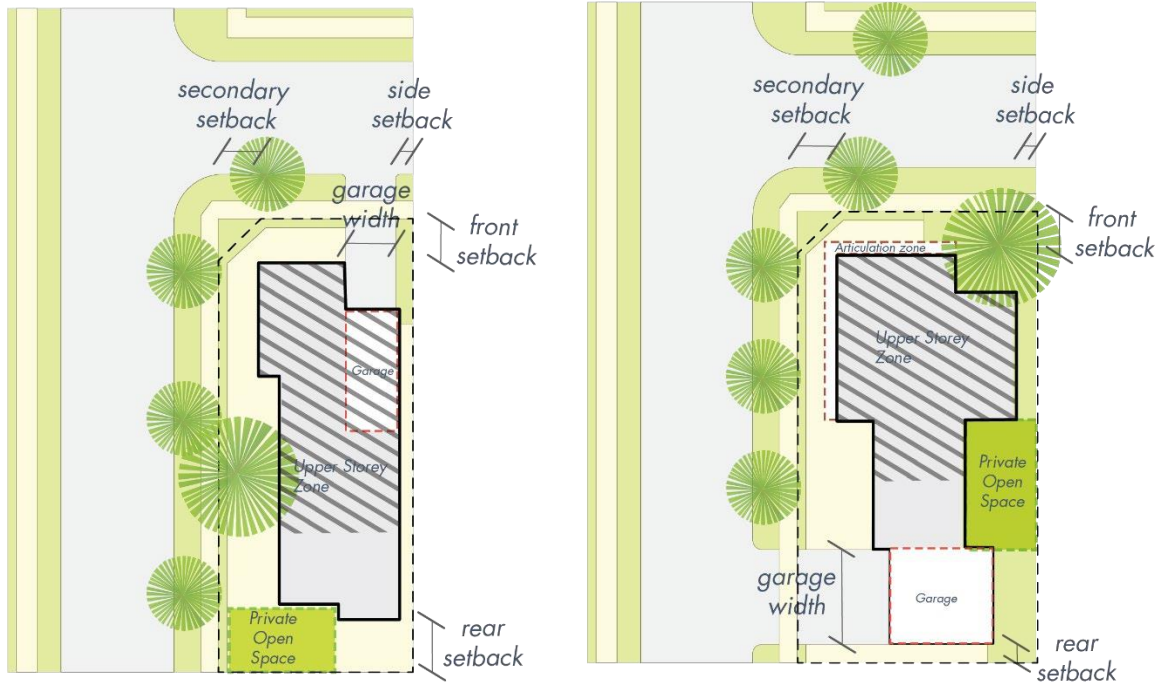


Figure 5.9 Battle Axe Lot Typology

Battle Axe Lot Typology

5.2.4. Corner Lots

1. Corner lots, including splays and driveway location, are to be designed in accordance with AS 2890 and Council's Engineering Specifications.
2. Corner lots are to be designed to allow dwellings to positively address both street frontages as indicated in Figure 5.10.
3. Garages on corner lots are encouraged to be accessed from the secondary street or a rear lane.
4. Plans of subdivision are to show the location of proposed or existing substations, kiosks, sewer manholes and/or vents affecting corner lots.
5. Corner lots are to comply with the requirements under section 6.12 and 6.13 Dwelling Design Controls.
6. Garages located on secondary street frontages are to be setback a minimum of 0.9m from the rear boundary of the lot (see Figure 5.10 Corner Lot Typology – side).



Corner Lot Typology-Front

Corner Lot Typology-Side

Figure 5.10 Corner lot typical configuration

5.2.5. Dual (Parallel) Street Frontages

1. The secondary frontage is to be detailed with the same architectural features as the primary elevation.
2. The secondary frontage must include an alternate dwelling entry.
3. A minimum setback of 3m is to be provided to the secondary frontage, including articulation.
4. Articulation to the secondary frontage to a public road must not exceed 60% of the lot frontage.
5. Private open space is to be located to the side of the dwelling.
6. Fencing is to be consistent on all lots adjoining Menangle Road.

5.3. Subdivision Approval Process in the R2 and R3 Zones

Objectives

- a. To facilitate a diversity of housing sizes and products.
- b. To establish a concise process for the approval of certain dwelling and lot types.
- c. To ensure that subdivision and development on smaller lots is undertaken in a coordinated manner.
- d. To ensure that all residential lots achieve an appropriate level of amenity.

Controls

1. The land subdivision approval process is to be consistent with the requirements of Table 5.3 below.
2. Subdivision of land creating residential lots less than 420m² and/or less than 11.5m wide shall include a Development Lot Plan as part of the subdivision development application.
3. Subdivision of land creating residential lots less than 375m² and/or lots less than 8m wide shall include a Building Sitting and Envelope Plan (BSEP) as part of the subdivision development application. The BSEP is to be included on the S88B instrument attached to the lot.

The Development Block Plan should be at a legible scale (suggested 1:500) and include the following elements:

- ▶ Location of street and site trees
- ▶ Location of driveways
- ▶ Indicative location of utility infrastructure services and sub stations
- ▶ Indicative location of waste bin collection zone
- ▶ Indicative location of dwelling

The BSEP should be at a legible scale (suggested 1:500) and include the following elements:

- ▶ Lot numbers, north point, scale, drawing title and site labels such as street names
- ▶ Maximum permissible building envelope (setbacks, storeys, articulation zones)
- ▶ Preferred principal private open space
- ▶ Designated landscape zones
- ▶ Garage size (single or double) and location
- ▶ Zero lot line boundaries

A BSEP should be fit for purpose and include only those elements that are necessary for that particular lot. Other elements that may be relevant to show include:

- ▶ Special fencing requirements
- ▶ Easements and sewer lines
- ▶ Retaining walls
- ▶ Preferred entry/frontage (e.g. corner lots)
- ▶ Access denied frontages
- ▶ Electricity kiosks or substations
- ▶ Indicative yield on residue or super lots

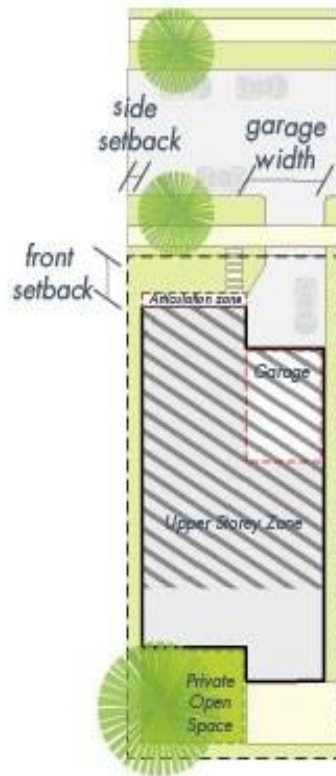
Table 5.3 Subdivision Approval Pathways

Approval Pathway	DA for Subdivision Only	DA for Subdivision with Development Block Plan	DA for Subdivision with BSEP Plan
	Pathway A1	Pathway A2	Pathway A3
Application	Lots equal to or greater than 420m ²	Lots less than 420m ² but greater than 375m ² and/or with a width less than 11.5m but greater than 8m	Lots less than 375m ² and/or with a width less than 8m
Dwelling Plans Required	As part of future DA or CDC	As part of future DA or CDC	As part of future DA or CDC
Dwelling Design 88B restriction required	No	Yes	Yes
Timing of subdivision (release of linen plan)	Pre-construction of dwellings	Pre-construction of dwellings	Pre-construction of dwellings



Typical Development Block Plan

Figure 5.11 Development Block Plan



Typical Building Siting Envelope Plan

Figure 5.12 Building Siting Envelope Plan



6.

Residential Development

6. Residential Development

6.1. Site Responsive Design

6.1.1. 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 careful 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 a 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;
- ▶ the siting, design and layout of the proposed site coverage plan and first floor plan;
- ▶ 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;
- ▶ whether the proposed development will involve any changes to existing site levels;
- ▶ location and uses of buildings on sites adjoining the land; and
- ▶ a stormwater concept plan (where required).

6.2. Sustainable Building Design

Objectives

- a. To maximise microclimate benefits to residential lots,
- b. To enhance streetscape amenity and ensure an appropriate standard of landscaping,
- c. To minimise energy usage and greenhouse emissions and encourage the adoption of renewable energy initiatives,
- d. To minimise consumption of potable water for non-potable uses, minimise site runoff and promote stormwater re-use, and
- e. To minimise the use of non-renewable resources and minimise the generation of waste during construction.

Controls

1. New residential dwellings, including a residential component within a mixed use building and serviced apartments, intended to be, or capable of being, strata titled, are to be accompanied by a BASIX Certificate and are to incorporate all commitments stipulated in the BASIX Certificate.
2. The design of dwellings is to maximise cross flow ventilation.

3. The positioning and size of windows and other openings is to take advantage of solar orientation to maximise natural light penetration to indoor areas and to minimise the need for mechanical heating and cooling.
4. Outdoor clothes lines and drying areas are required for all dwellings.
5. Wherever possible, it is recommended that metal roofs and garage doors have a solar absorption rate equal to or below 0.65 and tile roofs are to have a solar absorption rate equal to or less than 0.80 as classified by the National Construction Code.
6. All development applications are required to provide an external colours and materials palette.

6.3. Cut, Fill and Retaining Walls

Objectives

- a. To ensure that retaining walls are structurally sound to achieve long term structural integrity.
- b. To ensure slope stabilisation techniques are implemented to preserve and enhance the natural features and characteristics of the site and to maintain the long-term structural integrity of any retaining wall.
- c. To ensure that any retaining walls located on the property boundary have the appropriate written legal agreements in place, i.e., easements, to enable access to repair and/or maintenance of retaining walls.
- d. To ensure retaining walls are located to minimise any potential stormwater, visual, amenity or overlooking impact on adjoining properties or on the public domain.
- e. To guide the design and construction of low height and aesthetically pleasing retaining walls through the regulation of acceptable materials, colours and finishes.

6.3.1. Cut and Fill Controls

1. Earthworks shall be undertaken to a maximum of 1m excavation or fill from the present surface level of the property. Council will assess proposals for excavation or fill greater than 1m having regard for visual impact of proposed earthworks.
2. Any excavation within the zone of influence of any structure requires a 'dilapidation report' prepared by suitably qualified person. This report is to demonstrate adequate measures are implemented to protect the integrity of the structure. Note: The zone of influence is defined as the volume of soil around the excavation affected by an external load, for example vehicles, plant and excavated material.
3. Filling is to be avoided within 2m of any property boundary unless sufficient details are submitted to Council illustrating how privacy, overshadowing, stormwater management and access issues have been addressed to Council's satisfaction.

6.3.2. Retaining Wall Controls

1. All retaining walls (i.e. structure or landscaped) need to be identified in the DA plans.

2. Any retaining wall exceeding 1m shall be designed by a structural engineer and made from appropriate material.
3. Any retaining wall shall not adversely alter surface flows to adjoining private land.
4. To limit the overall height impacts of retaining walls on sloping sites, terracing of retaining walls is required for retaining walls with a minimum height of 1m.
5. Retaining walls situated within the front setback cannot exceed 600mm in height. Where a retaining wall in excess of 600mm is required, a split retaining wall is to be constructed. Retaining walls visible from the street or public open space frontages cannot exceed 600mm in height.
6. Any retaining walls and associated structures shall be designed to be located wholly within the property boundary, except where written or legal agreements have been reached between relevant parties to Council's satisfaction.
7. A 500mm wide planted strip must be provided between any terraced retaining walls.
8. The height and design of any proposed fence on top of a retaining wall must be included in the consideration of the overall height of the fence and retaining wall.
9. Balustrading will be required in accordance with the Building Code of Australia, to ensure the safety of the public, where the retaining wall adjoins a public place and where there is a change in level greater than 1 metre to the surface beneath.
10. Adequate provision must be made for the proper disposal of surface and subsurface drainage associated with the erection of retaining walls. The method of disposal must be approved by Council and could include:
 - a. The connection of sub-surface drainage from the retaining wall to the street gutter, or
 - b. Disposal via properly constructed absorption trench/es on the property containing the retaining wall, or
 - c. Disposal via piped or channelled drainage easement/s, or
 - d. Other means as determined by Council.

Note: All surface and sub-surface drainage must not discharge directly onto other adjoining properties unless a drainage easement has been created.

11. Retaining walls are to be constructed from natural stone, coloured concrete sleepers and rendered or feature block walls/brick if consistent with dwelling materials.

6.3.3 Retaining Wall Setback Controls

1. A retaining wall shall be restricted to a maximum height above or depth below existing natural ground level of no more than:
 - a. 600mm at any distance up to 900mm setback from any side or rear boundary; or
 - b. 1m, if the toe of the retaining wall or embankment is setback greater than 900mm from any side or rear boundary.

Note: Council may consider a variation to the abovementioned maximum height / depth of a retaining wall, in cases where the subject site is steeply sloping and the proposed retaining wall is setback more than 1 metre from any side or rear common property boundary. Additionally, appropriate structural design details and in some cases, terracing or landscape screening will be required.

2. Any retaining wall or combined fence and retaining wall within the primary front setback must have a minimum setback of 450mm from the front property boundary.
3. Any retaining wall proposed directly on or within 450mm from a side boundary (irrespective of being within the front or rear yard) must provide the written consent of the adjoining affected land owner at the time any development application is lodged with Council. The written consent should agree to not only the lodgement of the development application but to agree to the creation of any easements created over the land for the purpose of access and maintenance of the proposed retaining walls.

6.4. Dwelling Height, Massing and Siting

Objectives

- a. To ensure development is of a scale appropriate to protect residential amenity.
- b. To ensure building heights achieve built form outcomes that reinforce quality urban and building design.
- c. To establish differentiation in building heights, massing and building form across the zonings that apply in Menangle Park.

Controls

1. In the C4 zone dwellings should typically be of single storey construction.
2. All heights and number of storeys of development must comply with the relevant standards identified in the Campbelltown Local Environmental Plan 2015.
3. Council may permit an attic in the R2, RU2 and R5 zones. if it is satisfied that:
 - ▶ the dwelling is located on a prominent street corner; or
 - ▶ the dwelling is located adjacent to a neighbourhood or local centre, public recreation or drainage land, a golf course, or a riparian corridor; or
4. the dwelling is located 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.
5. All development is to comply with the maximum site coverage controls indicated in the relevant Tables in Section 6. Site coverage is the proportion of the lot covered by a dwelling house and the garage but excluding unenclosed balconies, driveways, verandas, porches, al fresco areas, garden sheds, etc.

6.5. Zero Lot Lines

1. The location of a zero-lot line is to be determined primarily by topography and should be on the low side of the lot to minimise water penetration and termite issues.
2. Typically, zero lot lines should be provided on lots with a frontage of less than 11.5m.

3. The maximum depth of a nominated zero lot line wall is 11m measured from the front building line of the dwelling. The zero lot wall lengths are to only consist of a garage and non-habitable area, or a tandem garage.
4. On all lots where a zero-lot line is permitted, the side of the allotment that may have a zero lot alignment must be shown on the plan of subdivision.
5. Where a zero-lot line is nominated on an allotment on the subdivision plan, the adjoining (burdened) allotment is to include a 900mm easement for single storey zero lot walls and 1200mm for two storey zero lot walls to enable servicing, construction and maintenance of the adjoining dwelling. No overhanging eaves, gutters or services (including rainwater tanks, hot water units, air-conditioning units or the like) of the dwelling on the benefited lot will be permitted within the easement.



Zero Lot Line Typology

Figure 6.1 Zero Lot Line Typology

6.6. Landscaped Area

Landscaped area is defined as an area of open space on a lot, at ground level, that is permeable and consists of soft landscaping, turf or planted areas and the like (refer to Figure 6.2-6.4).

Objectives

- a. To encourage the use of native flora species and low maintenance landscaping.
- b. To contribute to effective stormwater management, management of micro-climate impacts and energy efficiency.
- c. To ensure a balance between built and landscaped elements in residential areas.
- d. To contribute towards the creation of attractive, tree-lined streetscapes where landscape elements are utilised to help articulate front façade.
- e. To promote in-block tree planting where feasible to increase canopy cover and combat adverse urban heat island effects.

Controls

1. A landscaped plan is to be submitted with every development application. (A landscape plan is not required for change of use, modifications not related to landscaping and where Council agrees unnecessary). The landscaped plan is to show species, height and pot size, plants, trees and shrubs, grass, impervious surfaces and bin locations.
2. Artificial turf is not permitted.
3. The minimum soft landscaped area within any residential lot / development is to comply with the controls and principles in the relevant Tables in Sections 6.12 and 6.13 of this DCP.
4. At least 50% of the landscaped area required is to be behind the building line.
5. Plans submitted with the DA must indicate the extent of landscaped area and nominate the location of any trees to be retained or planted.
6. Surface water drainage shall be provided as necessary to prevent the accumulation of water.
7. Use of low flow watering devices is encouraged to avoid over watering. Low water demand drought resistant vegetation is to be used for the majority of landscaping, including native salt tolerant trees.
8. Areas less than 1.5m in width or depth will not be considered landscaped area and are not to be included in the landscaped area minimum size requirements.

6.7. Private Open Space

Objectives

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

Controls

1. Each dwelling is to be provided with an area of Principal Private Open Space (PPOS) consistent with the requirements of the relevant Tables in Sections 6.12 and 6.13.
2. The location of PPOS is to be determined having regard to dwelling type, design, allotment orientation, adjoining dwellings, landscape features and topography.
3. The PPOS is required to be conveniently accessible from the main living area of a dwelling or alfresco and have a maximum gradient of 1:10. Where part or all of the PPOS is permitted as a semi- private patio, balcony or rooftop area, it must be directly accessible from a living area.

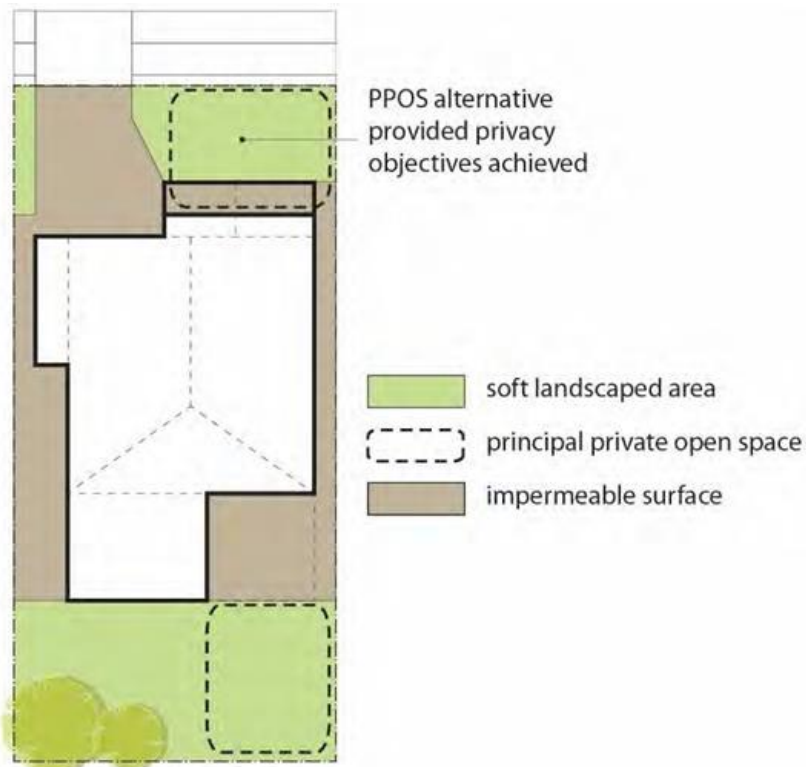


Figure 6.2 Private Open Space in Low Density Residential Setting

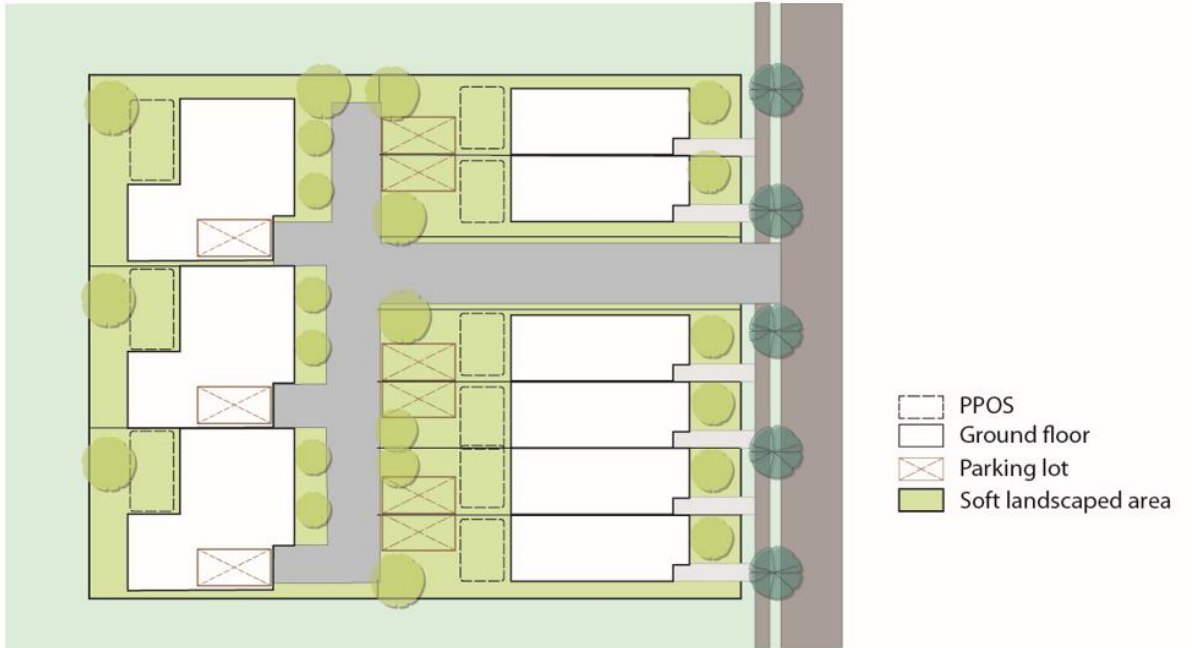


Figure 6.3 Private Open Space in Multi Dwelling Housing

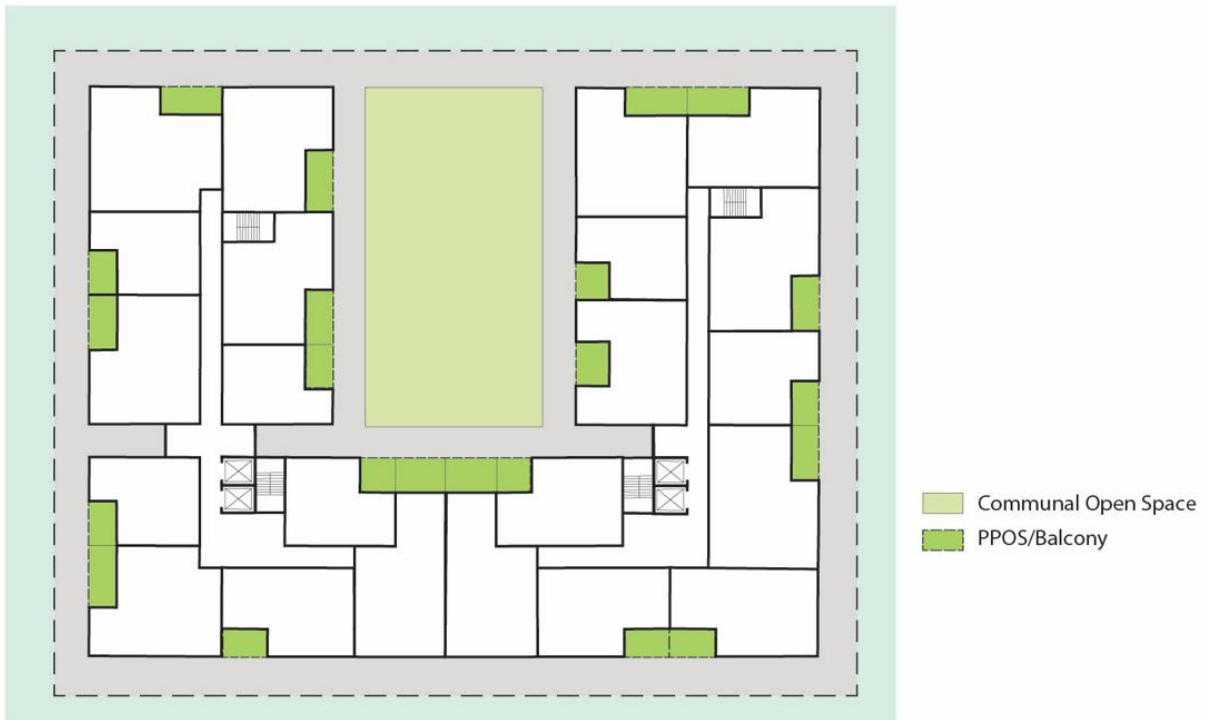


Figure 6.4 Private Open Space in Residential Apartments

6.8. Communal Open Space

Objectives

- a. To provide residential amenity in the form of communal / shared open space for the enjoyment of multiple residents
- b. To enhance the spatial quality, outlook, and usability of communal open space.
- c. To facilitate solar access and passive surveillance to areas of communal open space.

Controls

1. Multi dwelling and high density residential developments in the ~~R3~~, R4 and E1 zones must provide for areas of communal open space to be enjoyed by all residents. Communal open space is to be provided in addition to the required PPOS areas identified in Section 6.12 and 6.13.
2. Communal open space areas are to be only accessible by the residents of the development site.
3. Communal open space areas are to incorporate adequate screening including fencing and landscaping to provide visual privacy.
4. Where practical, communal open space areas are to be located at the ground level and be generally flat to minimise cut and fill.
5. Communal open space areas are to receive at least 3 hours of sunlight between 9am to 3pm in winter.
6. Communal open space areas are to be clearly marked on a Landscape Plan submitted with any DA and must include detail regarding vegetation planting.

For Residential Flat Buildings and Mixed-use Development incorporating Shop Top Housing

7. Each residential flat building/shop top housing shall be provided with communal recreation facilities for the use of all the occupants of the residential component of the building comprising:
 - a a recreation room with a minimum area of a 50sqm per 50 dwellings (or part thereof); and
 - b a bbq/outdoor dining area with a minimum area of 50sqm per 50 dwellings (or part thereof).
8. Communal recreation facilities shall not be located within the primary or secondary street boundary setback.
9. All communal recreational facilities shall be provided on the same land as the residential flat building/shop top housing.
10. All required communal and recreational facilities are required to be constructed prior to the issue of an interim occupation certificate for any residential units within a staged development.
11. Consideration will only be given to the provision of a roof top terrace as communal open space for shop top housing type development and, subject to appropriate landscaping treatment and recreation facilities provided; and satisfying the respective provisions of the RFDC.

6.9. Garages, Site Access and Parking

Objectives

- a. 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.
- b. 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.
- c. To minimise conflict between pedestrians and vehicles at the junction of driveways and footpaths.
- d. To provide convenient, functional and secure on-site parking for residents.

Controls

1. Car parking spaces should be located behind the building façade line where it is accessed from the street on the front property boundary.

Note: A car space may include a garage, carport or other hard stand area constructed of materials suitable for car parking and access. The required car parking spaces specified above may be provided using a combination of these facilities, including use of the driveway (within the property boundary only) as a parking space.

2. Driveways are to have the smallest configuration possible (particularly within the road verge) to serve the required parking facilities and vehicle turning movements and shall comply with AS2890.
3. Driveways are to have a minimum of 500mm landscaping on each side, particularly between the driveway and boundary.
4. To prevent parking over a public road verge, garages located on the secondary street frontage are to be setback either 2m or a minimum of 5.5m and integrated into the dwelling design. Garage setback from secondary street frontages that are greater than 2m but less than 5.5m will not be accepted. Note: a 2m setback will not facilitate a car parking space.

For front loaded garages:

5. Single garage doors should be a maximum of 3m wide and double garage doors should be a maximum of 6m wide. Exceptions to these requirements may be considered where an innovative design solution is demonstrated.
6. Minimum internal dimensions for a single garage are 3m wide by 5.5m deep and for a double garage 5.6m wide by 5.5m deep.
7. Garage doors are to be visually recessive through use of materials, colours, and overhangs such as second storey balconies.
8. Garages are to be set back at least 1m from the front façade of the dwelling.
9. Triple garages are only permitted on lots with a minimum area of 1,500m². The siting and design of triple garages will be assessed on merit.

For garages accessed from a laneway or shared driveway:

10. Minimum garage door width of 2.4m (single) and 4.8m (double).
11. Homogenous design of rear-loaded garages is to be avoided through incorporation of the following measures:
 - ▶ Use of alternative colour schemes and materials to neighbouring properties.
 - ▶ Offsets to side boundaries (i.e. between single and double rear loaded garages).
 - ▶ Utilisation of garages and carports (i.e. single garage and single carport on lots over 4.5m in width)

Basement Controls

12. Basement car parking is typically only supported for multi dwelling housing in the R3 zone and high-density residential development in the R4 and E1 zones. Innovative basement designs for larger lot housing may be supported in responding to steep natural gradients where they do not result in the dwelling having an appearance of more than 2 storeys at the street.
13. Basement and Semi Basement garages are only permitted whereby Council is satisfied of the following:
 - a. There will be no adverse impacts on privacy and amenity to the neighbouring dwellings;
 - b. The basement is generally below existing ground level;
 - c. Its sole purpose is for meeting car parking requirements, providing additional storage and/or for non-habitable purposes (i.e. home gym, workshop); and
 - d. Has a maximum floor area of 45 sqm (not inclusive of staircase).

6.10. Visual and Acoustic Privacy

Objectives

- a. To site and design dwellings to meet user requirements for visual and acoustic privacy, while minimising the visual and acoustic impacts of development on adjoining properties.
- b. To minimise the impact of noise of other non-residential uses such as parking and sport areas, restaurants and cafes and waste collection and goods deliveries.

Controls

1. Direct overlooking of main habitable areas and the private open spaces of adjoining dwellings should be minimised through building layout, window and balcony location and design, and the use of screening, including landscaping.
2. Living area windows with a direct sightline to principal private open space or to habitable room windows in an adjacent dwelling within 5 metres are to:
 - ▶ be obscured by fencing, screens or landscaping, or
 - ▶ be offset from the edge of one window to the edge of the other by a distance sufficient to limit views into the adjacent window; or

- ▶ have sill height of 1.5 metres above floor level; or
 - ▶ have fixed obscure glazing in any part of the window below 1.5 metres above floor level.
3. Balconies are not permitted on the first floor of the side and / or rear portion of the dwelling except where the balcony faces a public road, or land zoned for public recreation. Such balconies will be considered on their merits provided:
- a. Privacy and amenity impacts to adjoining properties are addressed, and
 - b. The balcony is setback at least 8m from the rear boundary, and
 - c. Has a maximum floor area of 15 sqm, and
 - d. The balcony is to be unenclosed on three of the four sides.

Unenclosed balconies are defined as balconies that have a wall height of less than 1.4m (on three external faces) and incorporate materials that are predominately transparent. i.e., timber slats, glass.

- 4. The design of dwellings must minimize the opportunity for sound transmission through the building structure, with particular attention given to protecting bedrooms and living areas.
- 5. In attached, semi-detached dwellings and multi dwelling developments, bedrooms of one dwelling are not to share walls with living spaces or garages of adjoining dwellings, unless it is demonstrated that the shared walls and floors meet the noise transmission and insulation requirements of the Building Code of Australia.
- 6. No electrical, mechanical or hydraulic equipment or plant shall generate a noise level greater than 5dBA above background noise level measured at the property boundary during the hours 7.00am to 10.00pm and noise is not to exceed background levels during the hours 10.00pm to 7.00am.
- 7. Dwellings along sub-arterial or arterial roads or any other noise source, should be designed to minimise the impact of traffic noise and, where possible, comply with the criteria in Table 6.4.
- 8. The internal layout of residential buildings, window openings, the location of outdoor living areas (i.e., courtyards and balconies) and building plant should be designed to minimise noise impact and transmission.
- 9. Balconies are only permitted on facades where they are facing streets or open space.

Table 6.1 Noise Criteria for Residential Premises impacted by traffic noise

	Sleeping areas	Living areas
Naturally ventilated/ windows open to 5% of the floor area (Mechanical ventilation or air conditioning systems not operating)	LAeq 15 hours (day): 40dBA LAeq 9 hour (night): 35dBA	LAeq 15 hours (day): 45dBA LAeq 9 hour (night): 40dBA
	Sleeping areas	Living areas
Doors and windows shut (Mechanical ventilation or air conditioning systems are operating)	LAeq 15 hours (day): 43dBA LAeq 9 hour (night): 38dBA	LAeq 15 hours (day): 46dBA LAeq 9 hour (night): 43dBA

Notes:

These levels correspond to the combined measured level of external sources and the ventilation system operating normally. Where a naturally ventilated/windows open condition cannot be achieved, it is necessary to incorporate mechanical ventilation compliant with AS1668 and the Building Code of Australia.

LAeq 1 hour noise levels shall be determined by taking as the second highest LAeq 1 hour over the day and night period for each day and arithmetically averaging the results over a week for each period (5 or 7 day week, whichever is highest)

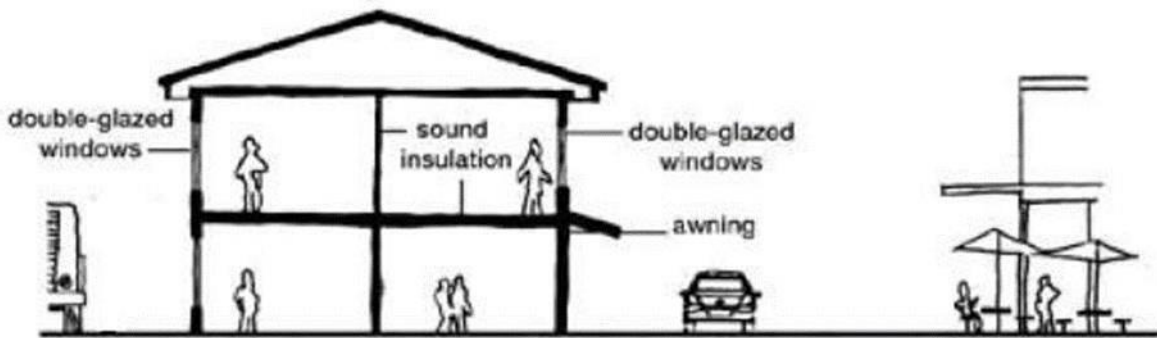


Figure 6.5 Strategies for minimising noise transmission

10. For residential development adjoining sub-arterial and collector roads, where external traffic noise level limits will be exceeded at the façade of the residential premises nearest to the noise source, the development will be deemed to comply if:
 - ▶ the principal private open space area of the residential premises complies with the relevant noise limit; and
 - ▶ the internal noise levels identified in Table 6.1.

11. Architectural treatments are to be designed in accordance with AS3671 - Traffic Noise Intrusion Building Siting and Construction, the indoor sound criteria of AS2107 - Recommended Design Sound Levels and Reverberation Times for Building Interiors.

6.11. Fencing

Objectives

- a. To ensure boundary fencing is of a high quality and does not detract from the streetscape,
- b. To encourage the active use of front gardens through provision of a secure area,
- c. To ensure that rear and side fencing will assist in providing privacy to private open space areas, and
- d. To ensure that fence height, location and design will not affect traffic and pedestrian visibility at intersections.

Controls

1. Any fence forward of the building line to the primary street frontage or side boundaries is to be a maximum of 1.2m high and with a predominantly open character. The design of the fence is also to integrate a letterbox.
2. Front fences and walls are not to impede safe sight lines for traffic.
3. Side and rear fences are to be a maximum of 1.8m high. Fencing not visible from the street is required to be a maximum of 1.8m high and must finish 6.5m from the front boundary and return to the side wall of the home.
4. On corner lots or lots that have side boundaries adjoining open space, drainage or a road; the front fencing style and height is to be continued along the secondary street or open space/drainage land frontage to at least 8.5m from the primary street boundary. Principles for corner lots are illustrated at Figure 5.10.
5. On corner lots and boundaries that adjoin open space, fencing is to be of a high-quality material and finish. The design of the fencing is to permit casual surveillance of the public space by limiting fence height to 1.2m or by incorporating see through materials or have a transparency ratio of 3:1 transparent: solid for the portion of the fence above 1.2m high.
6. Pre-painted steel or timber paling or lapped/capped boundary fencing is not permitted adjacent to open space or drainage land or on front boundaries.
7. The height of a fence should be measured cumulatively as a combination of the retaining wall and fence atop.
8. Consideration is to be given to potential loss of privacy and/or overshadowing to adjoining properties where side and/or rear boundary fences are to be located on top of retaining walls on the respective boundary.

Fencing Controls for C4 and RU2 Lots

1. Fencing must:
 - ▶ not be higher than 1.8m above ground level (existing)
 - ▶ not include any masonry construction that extends more than 3m from either side of the entrance to the property from the primary road
 - ▶ be constructed using post and wire or post and rail
 - ▶ if it is constructed or installed on a flood control lot—not redirect or interrupt the flow of surface or ground water on that lot.

2. Use of solid metal fencing (Colourbond) is prohibited

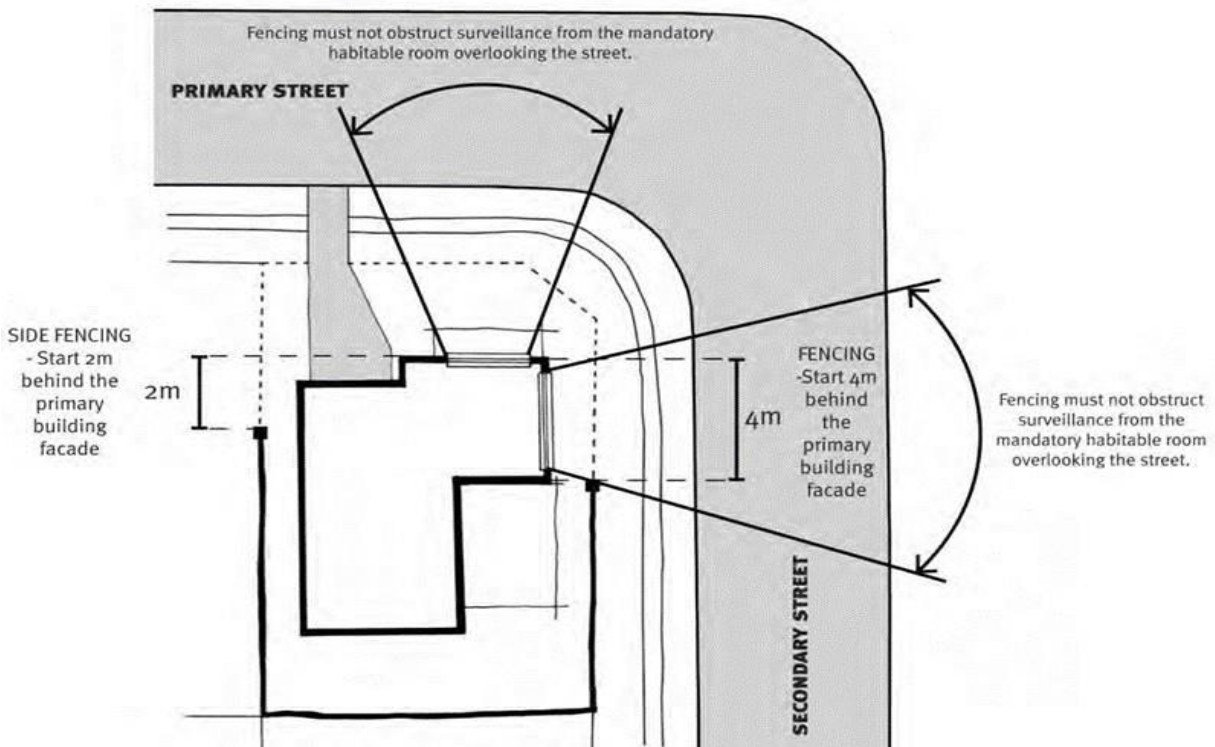


Figure 6.6 Fencing design for corner lots

6.12. Dwelling Design Controls by Zone

6.12.1. Environmental Living and Rural Lifestyle Lots

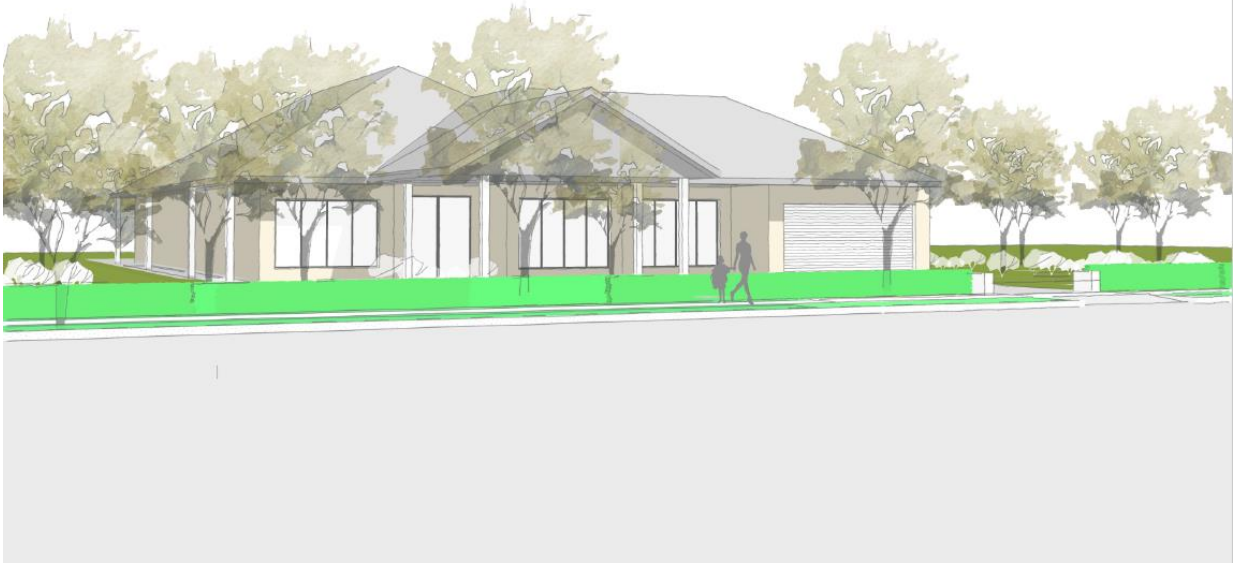


Figure 6.7 *Environmental Living*

The following controls apply to residential development in the RU2 Rural Landscape and C4 Environmental Living zones.

Objectives

- a. Deliver housing which is site responsive and sensitive to the natural and physical environmental characteristics of the landscape.
- b. Encourage quality-designed dwelling houses that make a positive contribution to the streetscape and amenity of the neighbourhood.
- c. Provide controls for larger rural lifestyle and estate housing in a manner that does not compromise sensitive environmental qualities, the capacity or affectations of the land.

Controls

1. Dwellings in the RU2 Rural Landscape and C4 Environmental Living zones shall comply with the requirements set out in Table 6.5 below.
2. All development is to be sited predominantly on the flattest part of lots to avoid the need for bulk earthworks.
3. All development should be sited and designed to be clear of natural hazards, prominent landscape or landform features and any special biodiversity or wilderness conditions.

4. The removal of native vegetation and trees is to be avoided.
5. Rural boundary fencing to a height of 1.5m is encouraged comprising of open-style timber palings or similar.
6. Impacts to prominent view lines or corridors across rural lands should be addressed as part of any Development Application for new residential development. Dwellings and all ancillary structures should be sited to preserve prominent views to ridgelines, scenic hills or the Nepean River.

6.12.2. Large Lot Residential



Figure 6.8 Large Lot Residential

The following controls apply to residential development in the R5 Large Lot Residential zone.

Objectives

- a. Provide housing in a rural setting which has a minimal environmental impact on its surrounds.
- b. Provide housing on sites which is respectful to natural views and landscape forms.
- c. Provide controls for Large Lot housing to ensure it achieves a high standard of urban design that is compatible with the Menangle Park precinct.

Controls

1. Dwellings in the R5 Large Lot Residential zone shall comply with the controls set out in Table 6.6.
2. The dwelling layout must be designed around site characteristics including elevation, vegetation, orientation and site constraints.

3. A minimum of four trees must be provided to the front and rear setback. Tree species are to be a minimum pot size of 60L when planted and capable of growing between 6-10m in height at maturity.
4. All dwelling houses are to be oriented towards the street.

Table 6.2 Dwelling Controls for the R5 zone

Criteria	751 – ≤1,000sqm	1,000sqm +
Building Height	Typically two storeys	Typically two storeys
Front Setback	5m	5-10m
Side Setback	1.5m	3-5m
Rear Setback	8m	10m
Secondary Street Setback	3m	5m
Maximum Site Coverage	50%	40%
Minimum Landscaped Area	30%	40%
Minimum Principal Private Open Space	50sqm	100sqm
Garages and Car Parking	Minimum 2 car spaces Triple garages permitted on sites over 1,500sqm (third garage to be setback 1m behind double garage).	
Alfrescos (min)	6 x 6m	

6.12.3. Low Density Residential



Figure 6.9 *Low Density Residential*

The following controls apply to residential development in the R2 Low Density Residential zone.

Objectives

- a. Provide a genuine diversity of contemporary dwellings on traditional low density lots.
- b. To provide affordable housing for the community that meets the needs of existing and future residents.
- c. Encourage quality-designed dwelling houses that make a positive contribution to the streetscape and amenity of the neighbourhood.

Controls

1. Dwellings in the R2 Low Density Residential zone shall comply with the requirements set out in Table 6.7 below.
2. The primary street facade of a dwelling should address the street and must incorporate at least two of the following design features:
 - ▶ entry feature or porch;
 - ▶ awnings or other features over windows (excluding roller shutters);
 - ▶ balcony treatment to any first-floor element;
 - ▶ recessing or projecting architectural elements;
 - ▶ open verandah;
 - ▶ bay windows or similar features; or
 - ▶ Verandas, pergolas or similar features above garage doors.

3. At least 1 habitable window is to be provided to the front façade of the dwelling for lots with a frontage of less than 12 metres. At least 2 habitable windows are to be provided in the front façade for lots with a frontage exceeding 12 metres in width.
4. The articulation zone is to occupy no more than 50% of the frontage, excluding any garage.
5. Corner lot development should emphasise the corner. The secondary street facade for a dwelling on a corner lot should address the street and must incorporate at least two of the above design features. Landscaping in the front setback on the main street frontage should also continue around into the secondary setback.
6. Modulation of the façade should be integral to the design of the building, rather than an unrelated attached element.
7. 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 will consider alternative solutions to eaves so long as appropriate sun shading is provided to windows and display a high level of architectural merit.
8. Carports and garages are to be constructed of materials that complement the colour and finishes of the main dwelling.
9. Streets should be fronted with a diversity of housing types and architectural styles to create an attractive street character.
10. Minimum length of articulation from front building line for corner lots is 4m, the secondary setback articulation is to be 2m from the boundary.
11. For lots equal to or less than 420m², at least 2 hours of direct sunlight is to be received to 50% of the PPOS area of the proposed dwelling between 9am and 3pm on 21 June.
12. For lots above 420m², at least 3 hours of direct sunlight is to be received to 50% of the PPOS area of the proposed dwelling between 9am and 3pm on 21 June.
13. A minimum of two trees must be provided to the front and rear setback. Tree species are to be a minimum pot size of 60L when planted and capable of growing between 6-10m in height at maturity.

Table 6.3 Dwelling Controls for the R2 zone

Criteria	375-≤420sqm	421-≤600sqm	601 – ≤750sqm
Building Height	As per the CLEP 2015		
Primary Front	4.5m	4.5m	4.5m
Articulation Encroachment Zone	1m	1m	1m
Garage to Primary (Front)	5.5m	5.5m	5.5m

Criteria	375-≤420sqm	421-≤600sqm	601 – ≤750sqm
Side Setbacks	900mm	900mm	1.5m
Rear Setbacks	4m (ground floor) 6m (second storey)	4m (ground floor) 8m (second storey)	6m (ground floor) 8m (second storey)
Secondary Setbacks	3m	3m	3m
Maximum Site Coverage	65%	60%	60%
Maximum Upper Floor Area (% of Ground Floor Area)	75%	70%	50%
Minimum Landscaped Area	25%	25%	30%
Minimum Principal Private Open Space (PPOS)	20sqm	25sqm	30sqm
Minimum Width POS – directly accessible from internal living areas, can include alfrescos	4m	5m	5m
Minimum No. of Car Parking Spaces (on site)	2 car spaces (at least one must covered)	2 car spaces (at least one must covered)	2 car spaces (at least one must covered)
Maximum Garage Door Width	No more than 60% of building width	No more than 50% of building width or 6m, whichever is the lesser	No more than 50% of building width or 6m, whichever is the lesser
Outbuilding Side and Rear Setbacks	N/A	900mm	900mm
Outbuilding Maximum Height	N/A	4.8m	4.8m
Storage	Linen Press	Linen Press + 2m ³	Linen Press + 4m ³

6.12.4. Medium Density Residential the R3 Medium Density Zone



Figure 6.10 R3 Medium Density

The following controls apply to Medium Density Residential development in the R3 Medium Density zone.

Objectives

- a. Promote housing choice and affordability through the provision of innovative Medium Density Residential which benefits from direct access to local amenity and public transport.
- b. Deliver Medium Density Residential which is site responsive and sensitive to natural and physical environments.
- c. Encourage quality-designed Medium Density Residential that makes a positive contribution to the streetscape and amenity of the neighbourhood.
- d. Avoid homogenous designs and promote a genuine diversity of small lot housing.
- e. Locate the smallest lots on collector roads and bus routes, around parks and close to community facilities.

Controls

- 1. Dwellings in the R3 Low Density Residential zone shall comply with the requirements set out in Table 6.8 below.
- 2. The primary street facade of a dwelling should address the street and must incorporate at least two of the following design features:
 - ▶ entry feature or porch;
 - ▶ awnings or other features over windows;

- ▶ balcony treatment to any first-floor element;
 - ▶ recessing or projecting architectural elements;
 - ▶ open verandah;
 - ▶ bay windows or similar features; or
 - ▶ Verandas, pergolas or similar features above garage doors.
3. At least 1 habitable window is to be provided to the front façade of the dwelling for lots with a frontage of less than 11.5 metres.
 4. Corner lot development should emphasise the corner. The secondary street facade for a dwelling on a corner lot should address the street and must incorporate at least two of the above design features.
 5. Applications for Medium Density Residential must demonstrate opportunities for landscaping within the front and rear setback areas. The planting of at least one site tree should be provided as part of the application for the dwelling unless it can be sufficiently demonstrated that tree planting is not feasible due to other site constraints.
 6. Modulation of the façade should be integral to the design of the building, rather than an unrelated attached element.
 7. Street facing upper level balconies and ground level courtyards are permitted for lots on the south-side of streets serving as principal private open space where they can demonstrate good residential amenity and control of visual and acoustic privacy impacts.
 8. Any private open space located within the front portion of the lots is to be located behind the primary street setback and must be obscured from view of the public domain by suitable landscape or articulated fencing treatments.
 9. Rear loaded open-stand car parking solutions should be designed to serve as a multi-purpose private open space.
 10. 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 will consider alternative solutions to eaves so long as appropriate sun shading is provided to windows and display a high level of architectural merit.
 11. Carports and garages are to be constructed of materials that complement the colour and finishes of the main dwelling.
 12. Alfrescos are required to be within the building footprint/roofline and are to be demonstrated on the proposed floor plans.

Table 6.4 Dwelling Controls for the R3 zone

Criteria	Rear Loaded (6.5m-8m width)	Front Loaded (8m+ width)
Building Height	12m	12m
Primary Front Setback	3m	3m
Articulation Encroachment Zone	1m	1m
Garage to Primary (Front)	N/A	4m
Side Setbacks	0-900mm	900mm
Rear Setbacks	0.5m (rear access garage)	4m (ground floor) (6m second storey)
Secondary Setbacks	3m	3m
Maximum Site Coverage	75%	65%
Maximum Upper Floor Area (% of Ground Floor Area)	85%	80%
Minimum Landscaped Area	25%	25%
Minimum Principal Private Open Space (PPOS)	16sqm	20sqm
Minimum Width POS – directly accessible from internal living areas, can include alfrescos	4m	4m
Minimum No. of Car Parking Spaces (on site)	1-2 bedrooms = 1 car space 3+ bedrooms = 2 car spaces	1-2 bedrooms = 1 car space 3+ bedrooms = 2 car spaces (at least one must be covered)
Maximum Garage Door Width	Subject to merit assessment	No more than 60% of building width

6.13. Additional Controls for Certain Dwelling Types

6.13.1. Attached Dwellings

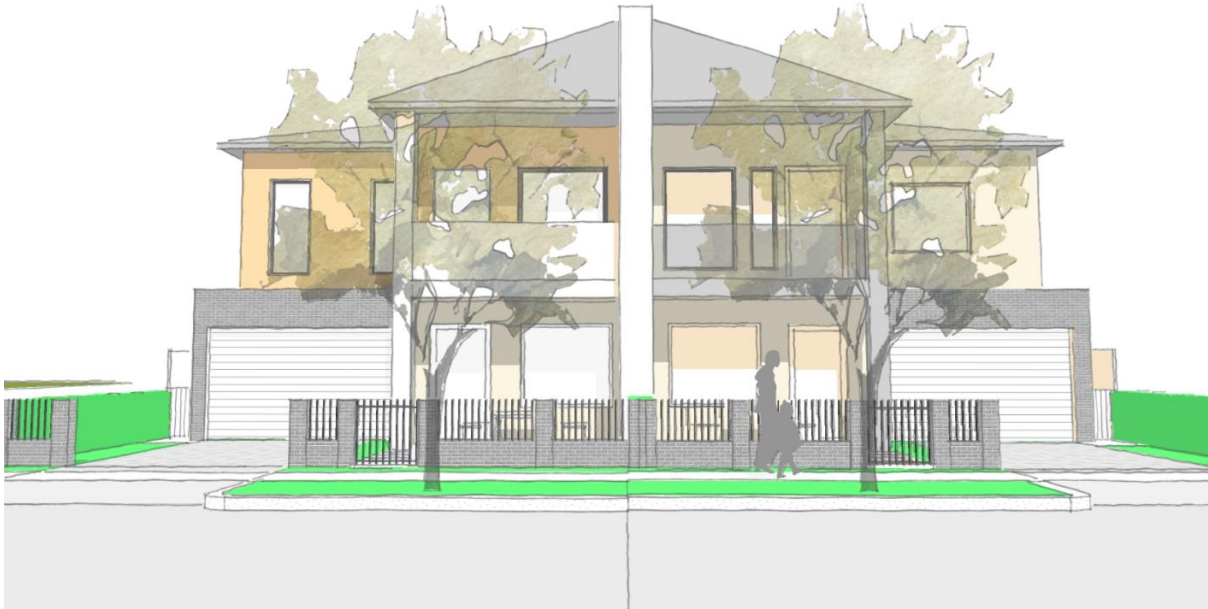


Figure 6.11 Attached dwellings

The following controls apply to Attached Dwellings, that are a form of development permissible in the R2, R3 zones.

Objectives

- a. To ensure that the development of attached dwellings creates an architecturally consistent street character.

Controls

1. Attached Dwellings are to be designed in accordance with the controls in Table 6-5.
2. Garages for attached dwellings are located at the rear of the lot, accessible from a rear lane or secondary street.
3. Attached dwellings should have a pleasing rhythm and order when seen together as a group, rather than appear as a random arrangement of competing dwellings. Each dwelling should benefit from the unified design of the whole form, a co-ordinated style and base colour palette. Individuality can be added as small details or accent colours, rather than strikingly different forms.
4. The maximum number of attached dwellings is six (6) in a set in the R3 zone and three in the R2 zone.

Table 6.5 Attached Dwelling Controls (R2 and R3 zones)

Criteria	200sqm +
Building Height	2 storeys (under Clause 4.3A Height restriction for Certain Development Accommodations the CELP 205 , Attached Dwellings are limited to 2 Storeys)
Front Setback	3m
Side Setback	900mm Ground Level 1.2m Upper Level
Rear Setback	4m
Secondary Street Setback	2m
Maximum Site Coverage (Ground Level)	70%
Minimum Landscaped Area	30%
Garages and Car Parking	Minimum 1 garage or basement space per dwelling
Minimum PPOS	16sqm per dwelling
Minimum width of PPOS	3m

6.13.2. Secondary Dwellings and Dual Occupancies

Controls for dual occupancies are in part determined by whether the secondary, principal or dual occupancy dwelling is proposed at the time of the application or at some point in the future to be strata subdivided. Strata subdivisions create the need for separate or common property dwelling entries, parking and open space to service each dwelling. Secondary dwellings are not permitted to be subdivided from the Principal Dwelling.

The controls that follow apply to secondary dwellings and dual occupancies.

Objectives

- a. To enable the development of a diversity of dwelling types which assists in contributing to the availability of affordable housing.
- b. To promote innovative housing solutions that are compatible with the surrounding residential environment.
- c. To ensure that the development is designed to complement the design of the principal dwelling and be subservient to the principal dwelling in terms of visual bulk and scale.

- d. To minimise the impacts of development on the principal development and neighbouring properties with regards to view, privacy and overshadowing.
- e. Ensure that room sizes within secondary dwellings are functional, of sufficient size and cater for the intended use of the secondary dwelling.
- f. To provide casual surveillance to rear lanes.

Controls - Secondary dwellings

1. Secondary dwellings shall comply with the key controls in Table 6.6.
2. The principal and secondary dwelling (and all ancillary structures) must not exceed site coverage stipulated in Tables 6.6 dependent on zone and lot size.
3. The finishes, materials and colours of the secondary dwelling are to complement the principal dwelling in its construction features.
4. Windows and private open spaces must not overlook the private open space of any adjacent dwellings. Windows that potentially overlook adjacent lots must either have obscured glazing, be screened or have a minimum sill height of 1.5m above floor level.
5. Secondary dwellings and associated garages may have a zero-lot setback to one side boundary and may be attached to another garage/secondary dwelling on an adjoining lot, particularly where the secondary dwelling is associated with an attached or semi-detached dwelling.
6. Where the secondary dwelling is built to a zero-lot line on a side boundary, windows are not to be located on the zero lot wall unless that wall adjoins a laneway, public road, public open space or drainage land.
7. Rear garages with secondary dwellings may have first level balconies facing the lane provided the balcony remains within the lot boundary.
8. Where a secondary dwelling is built over a rear garage and separated from the upper levels of the principal dwelling, there must be a minimum separation of 5m between the upper floor rear façade of the principal dwelling and the secondary dwelling.

Table 6.6 Controls for Secondary Dwellings

Element	Secondary Dwelling
On-site car parking	No additional car parking space required.
Principal Private open space	No separate private open space required.
Subdivision	Subdivision from principal dwelling not permitted.
Access	Clear line of access of minimum 900mm to street or laneways is to be provided to the Secondary Dwelling.
Services and facilities	No separate services or facilities required.

Controls – Dual occupancies & Semi-Detached Housing



Figure 6.12 Dual Occupancies

1. Dual occupancies are to comply with the controls in Section 6 – Residential Controls, Tables 6.3 and 6.4 except where the controls in this clause differ, in which case the controls in this clause take precedence.
2. Dual Occupancies must not exceed site coverage stipulated in Tables 6.3 and 6.4 and are to be calculated as prior to subdivision (existing lot).
3. The design of both dwellings in a dual occupancy development is to be consistent in finishes, materials and colours, however, should differentiate on construction façade features.
4. Dual occupancy development is not permitted on a lot that contains an attached dwelling, or on a battle-axe lot.
5. Dual occupancy dwellings are permitted at the rear of lots (i.e. behind a dwelling that has frontage to a principal street, whether attached or detached to that dwelling) only where:
 - ▶ Each dwelling has direct pedestrian and vehicle access to a public road; and
 - ▶ Garbage and mail facilities are accessible by service vehicles and by the occupants of the dwellings.
6. Where the dual occupancy dwellings are to be strata subdivided:
 - ▶ Private open space is to be provided for each dwelling in accordance with the relevant controls.
 - ▶ Shared private open space is to be provided equivalent to 15% of the site area and shown as communal space on the strata plan, and a minimum area of private open space of 10m² with a minimum dimension of 2.5m is to be provided for each dwelling.

7. The minimum landscaped area on a lot containing a dual occupancy development is to be 25% of the site area.
8. Where practical for front loaded driveway access, shared driveway crossings of the nature strip are to be provided to service both dwellings.
9. Dual Occupancy development in large lot, rural and environmental zones must ensure that the dwellings are physically attached by way of a common wall under the same roofline and have the general appearance of a single dwelling-house (rather than two individual dwellings) when viewed from the primary street frontage. Structures such as carports, breezeways, pergolas, covered awnings and the like are not acceptable as a mode of attachment.

6.13.3. Multi Dwelling Housing



Figure 6.13 Multi Dwelling Housing

The following controls apply to Multi Dwelling Housing developments in the R3 Zone. Multi dwelling housing is defined under the Campbelltown Local Environmental Plan 2015 as “3 or more dwellings (whether attached or detached) on one lot of land, each with access at ground level, but does not include a residential flat building.”

Area 3 Lot Size Map, CLEP 2015: The minimum lot size for multi dwelling housing (within Area 3, under the CLEP 2015) in the R3 zone is 1,500m². Multi dwelling housing development may be subdivided under a Strata title only with consent. Further Torrens title subdivision is not permitted.

Objectives

- a. To ensure that the design of multi-dwelling housing is consistent with the character of other Medium Density Residential and other permissible residential development in the R3 zone.
- b. To ensure the quality of multi-dwelling housing is of a high quality and contributes to the amenity of residents.

- c. To ensure that each dwelling within a multi dwelling housing development is afforded equal access to open space and amenity.

Controls

1. Multi-dwelling housing sites are to have direct frontage to a public road (i.e., not on battle-axe lots) and are encouraged on corner sites.
2. Multi-dwelling housing is to consider dwelling design, adjoining dwellings, landscape features, street trees, vehicle crossovers and lot orientation.
3. The design of each dwelling in a multi dwelling housing development is to be slightly differentiated to avoid the presentation of homogenous built form presenting in a streetscape.
4. The primary street frontages of multi dwelling housing developments are to be densely landscaped to soften the visual appearance of the built form and control massing and bulk.
5. Each dwelling in a multi dwelling housing development must be provided with its own:
 - ▶ PPOS area
 - ▶ Separate access to the street from the front pedestrian entrance
 - ▶ At least 1 car parking space and storage for at least 1 bicycle and 10m³ for general household items
 - ▶ Private facilities for clothes drying
 - ▶ Internal primary living area of a minimum 4m x 4m clear of obstructions and hallway spaces
6. Multi-dwelling housing is to comply with the controls in Table 6.7.

Table 6.7 Key controls for multi dwelling housing

Criteria	Controls
Min Lot Size	1,500sqm only for Area 3 under the CLEP 2015
Min Lot Width	30m
Min internal site area per dwelling	200sqm
Site coverage (max)	55%
Minimum building envelope (ground floor) per dwelling	95sqm internal
Minimum no. of bedrooms per dwelling (Applies only to Area 3 on the Lot Size Map of the CLEP2013)	2 x bedrooms Min 1 x master bedroom comprising an area of 4m x 4m with an ensuite and walk-in-robe
Landscape Area	30% of site area
Minimum area of primary and secondary road frontage to be landscaped	35%
Communal Open Space (Applies only to Area 3 on the Lot Size Map of the CLEP2013)	Min area per 1,500m ² block = 80sqm
Front Setback (minimum)	3m to building façade line; 1.0m to articulation encroachment zone

Criteria	Controls
Corner lots secondary street setback (min)	2m
Site Setback (min)	Ground floor 0.9m. Upper floor 1.2m
Rear Setback (min)	4m (excluding rear lane garages) 0.5m to rear lane (garages)
Internal Building Separation Distance	5m (unless dwellings are attached by a common wall)
Car Parking Spaces	1 car parking space per dwelling, plus 0.5 spaces per 3 or more bedroom dwelling, plus 1 visitor space per 5 dwellings. Basement parking is encouraged for multi dwelling housing.
Garages and Carparking Dimensions (minimum)	3m x 5.5m Aisle widths must comply with AS 2890.1 1-2 bedroom dwellings will provide at least 1 car space. 3 bedroom or more dwellings will provide at least 2 car spaces.

6.13.4. High Density Housing (Residential Flat Building and Shop Top Housing)



Figure 6.14 Residential Flat Building (illustrative purposes only – not to be taken as a control)

Objectives

- a. To enable the development of a diversity of dwelling types which assists in contributing to the availability of affordable housing.
- b. To promote innovative housing solutions that are compatible with the surrounding residential environment.
- c. To promote high-density living environments in that encourage walkability and healthy communities.

Controls

Table 6.8 Key controls for residential flat buildings

Criteria	Controls
Floor Space Ratio	2.5:1

Criteria	Controls
Setbacks	3.5 m from any street boundary
Building Height (Max)	Refer to the CLEP 2015 (Height of Buildings Map - Sheet HOB_003)
Building separation (Min)	In accordance with the ADG
Landscaped Area (min)	20%
Car Parking (minimum)	1 space per studio or 1 bedroom unit 1.5 spaces per 2 bedroom unit 2 spaces per 3 bedroom unit +1 space per 5 units (visitor parking)
Bicycle Parking	1 space per 4 dwellings within common property
Balcony Area	In accordance with ADG
Minimum Floor Space by dwelling type	1 bedroom = 50sqm 2 bedrooms = 70sqm 3 bedrooms = 90sqm Any additional bedroom should increase the minimum internal area by at least 12sqm
Criteria	Controls

Development for residential flat buildings is to take place in accordance with the above Table 6.8.

1. Sites should have a minimum frontage of 30m and a minimum depth of 30m.
2. Common open space must comply with SEPP 65 – Design Quality of Residential Apartments, where the minimum total area is equal to 25% of the site.
3. Apartments should receive a minimum of 50% direct sunlight for a minimum of 2 hours between 9:00am and 3:00pm on the 21st of June.
4. Residential flat buildings should be orientated towards open space.
5. A minimum of 2 electric vehicle charging spaces are to be provided per building, or 2% of total spaces (whichever is greater).
6. Vehicle entrances to RFBs should not front open space areas. Rather, vehicle entry driveways should be accessed from a secondary street.
7. Each apartment building shall include a study/nook area that is capable of accommodating a desk for working/ studying from home purposes. Such area shall be shown furnished on the proposed plans and shall have a minimum width of 1.6 m.
8. Apartments are to be designed to avoid overlooking into adjoining private open space areas.

9. Ground floor dwellings shall address and have direct entry points from the street whilst maintaining privacy to private open spaces. A maximum 1 metre grade can separate ground floor from the street.
10. Cross ventilation shall be achieved for at least 50% of each building.
11. Communication devices, solar collectors etc. are to be integrated into the design of the building.
12. Building materials must be selected to provide a contextual fit with the character of the surrounding area, both in regard to the natural environment and the existing built form.
13. Deep Soil zones are to be provided in accordance with ADG requirements.
14. Deep soil zones are to be furnished with large trees, as appropriate for the site, providing a high degree of canopy cover.
15. The principals of WSUD are to be considered and implemented in all designs.

6.14. Other development in residential areas

6.14.1. Exhibition Homes and Exhibition Villages

Objectives

- a. To ensure that exhibition homes and exhibition villages operate with minimal impact on surrounding residential areas, and
- b. To ensure that exhibition homes and exhibition villages operate for a limited time after which they revert to a conventional residential environment.

Controls

Any subdivision of land shall be in accordance with the requirements of Part 5 – Residential Development.

1. Any development application for an exhibition home is to have two sets of plans submitted. A set for the development with the purpose of an exhibition home, and second set to be when restored into a functioning dwelling. (This is to include any driveway, security lighting, signage, landscaping, fencing and garage change.)
2. Once the exhibition home has ceased operating, the dwelling is to be reinstated prior to the release of an occupation certificate.
3. Any proposed street within an exhibition village may be held as one lot within the development until the cessation of the operation of the exhibition village. Subdivision and dedication of roads to Council must be completed prior to the use of dwellings for residential accommodation.
4. Exhibition villages should be located on collector roads or as close to collector roads as possible, with vehicle access from a collector road.
5. Exhibition homes/ exhibition villages are not permitted:
 - ▶ where access is from a street with a carriageway width of less than 9.0 metres.
 - ▶ on streets which are cul-de-sacs.
6. Internal streets may be closed out of hours of operation only where the streets are not yet dedicated as public roads.
7. Exhibition homes must be provided with off-street parking for patrons at the rate tabulated below. This parking may be provided at the individual exhibition homes or at a centralized car park.

Number of Exhibition Homes	Number of Car Parking Spaces
1-5	3 per exhibition Home
5-10	15 +2 exhibition homes over 5
10 or more	25 + 1 per exhibition homes over 10

8. Where a central parking area is provided it must:
 - a. Comply with Council's requirements for public car parking,
 - b. Be located within 200m of all exhibition homes by a continuous pedestrian pathway, and
 - c. Have an adaptable or intended use after the exhibition village is closed.
9. Where parking is provided at an individual exhibition home it must be constructed and finished in a way that will give the appearance of a private driveway or parking spot when the exhibition village concludes.
10. Buildings used for such uses as providing home finance, materials display or take-away food and the like shall cease to operate when the exhibition home/village ceases unless separate approval is obtained to enable the continued operation of these uses.
11. The hours of operation shall be limited to 8am to 6pm each day. During the operation of an exhibition home/ exhibition village additional measures to maintain the privacy of adjoining residential development may be required.
12. When the use of the dwelling ceases to be an exhibition home, any garage that has been used as a sales office is to be reinstated as a functioning garage with an appropriate garage door and associated driveway, prior to the occupation of the dwelling for residential purposes.
13. Security lighting shall be provided in such a way to minimise any adverse impact on adjoining residential areas.
14. The operation of the exhibition village (including the use of designated off-street car parks) shall not cause offensive noise or affect the acoustic amenity of adjoining residents.
15. Waste disposal facilities shall be provided. These shall be located adjacent to the driveway entrance to the site.
16. All works affecting public roads, including new driveways, access roads and intersection works are to be in accordance with the requirements of this DCP and the relevant Council's Engineering Design for Development (Guide).
17. Any structure involving waste disposal facilities shall be located as follows:
 - ▶ Set back one metre from the front boundary to the street,
 - ▶ Landscaped between the structure and the front boundary and adjoining areas to minimise the impact on the streetscape, and
 - ▶ Not be located adjacent to an adjoining residential property.
18. Details of proposed signage are to be submitted with the DA for an exhibition village or home. Types of exhibition identification signs must be limited to:
 - a. One Pole/Pylon sign having maximum dimensions of 3.5 (h) x 1.2 (w) per exhibition home.
 - b. Two wall signs having a maximum area of 1m² per sign per exhibition home.

- c. Signage is to be located wholly within the property boundary.

An architectural rendering of a park town center. The scene is filled with people, including children playing in a water fountain and adults walking. In the background, there is a modern playground structure with a large slide and a wooden tower. The entire image is overlaid with a large, semi-transparent green shape that tapers from the top left towards the bottom right. The number '7.' is prominently displayed in white on the green overlay.

7.

Menangle Park Town Centre

7. Menangle Park Town Centre

7.1. Vision and Objectives for the Town Centre

This section of the DCP contains objectives and controls relating to the Menangle Park Town Centre.

Vision

The Menangle Park Town Centre will comprise a high-quality, walkable urban space characterised by a range of land uses that bring vibrancy to the centre and integrate with its natural surroundings and higher density residential forms.

A key focus of the Town Centre is its interface with Howes Creek, supported by a sensitive built form, appropriate traffic calming and pedestrian/cycling facilities and its connection to a green spine that serves the broader precinct in which it is located.

The Town Centre will have a Main Street as the principal corridor, which is envisaged to be a slow-speed, pedestrian friendly local street that is activated by ground-floor retail and dining.

It will not be dominated by expanses of pavement and will be characterised by basement car parking. At grade parking will be limited and will be shaded where provided.

The Town Centre will be bounded by the Green Spine to the east and Cummins Road to the west, with Fitzpatrick Street transitioning into the desired shared-street and mixed-use urban form. The Town Centre will be intersected with local roads which will improve permeability and mobility, allowing for opportunities to encourage pedestrianisation, street activation and deliver a lively urban centre.

The precinct co-locates land uses to maximise efficiency and to support the local community that it serves. A high-quality street network and public domain will enhance the centre's pride of place in its local community.

Objectives

- a. To establish a Town Centre that co-locates compatible uses to maximise efficiency and facilitates a vibrancy of land use.
- b. To establish a clearly defined Main Street that is activated, supports a variety of mixed uses and contributes positively to a high-quality public domain of the Town Centre.
- c. To facilitate a street network that is shared between pedestrians and vehicles in a slow-speed environment and incorporates traffic calming measures.
- d. To facilitate active transport to and from the Town Centre by providing streets and pathways which prioritise walking and cycling.
- e. To embrace the Town Centre's proximity to Howe's Creek through a sensitive built form response involving street and pedestrian connectivity and the implementation of Water Sensitive Urban Design Principles.
- f. To discourage free-standing fast-food outlets;

- g. To ensure heavy vehicle servicing is fully integrated with minimum visual impact and movement conflicts.
- h. To optimise urban greening and shade provision.
- i. To minimise expanses of pavement including at-grade parking and encourage basement parking.
- j. To ensure land use compatibility and satisfactory amenity outcomes.

An indicative layout of the Town Centre has been prepared to guide development outcomes. The layout itself is guided by the above objectives and the various controls presented in this chapter. Any variation from the indicative layout must be consistent with the relevant principles and objectives of this chapter of the DCP.

7.2. Indicative Town Centre Layout

The layout of the Menangle Park Town Centre is to be delivered in accordance with Figure 7.1.



Figure 2: Structure Plan & Frontage Requirements



Figure 7.1 Illustrative Town Centre Master Plan

7.3. Land Uses

The Menangle Park Town Centre will incorporate a variety of integrated land uses to activate the precinct, meet the needs of future residents and provide a central community hub for residents and visitors to congregate.

Menangle Park Town Centre will integrate three primary land uses, being retail, commercial and residential which will be intersected by Main Street in the northern portion and a local road in the southern portion.

7.3.1 Retail

Retail uses (including hospitality and services) are envisaged to line Main Street and will provide essential services to meet the local community's needs. Retail uses are encouraged to activate their street frontage to create an inviting, bustling Town Centre.

7.3.2 Commercial

The Town Centre will facilitate a range of commercial floorspace that will generate local employment, provide essential services and enable community uses for residents. The presence of commercial uses within the town Centre will ensure its activation during business hours.

Note: Large scale commercial applications may, at the discretion of Council, need to be supported by an economic feasibility assessment.

7.3.3 Residential

Residential uses will be in the form of shop-top housing and other density formats, providing housing choice to serve the community's needs and an immediate 'critical mass' to support local businesses.

7.3.4 Service Infrastructure

Town Centre service infrastructure will facilitate full functionality and minimise adverse amenity impacts.

Principle

The Town Centre co-locates retail, commercial and residential uses in an enhanced street and public domain context that supports and encourages regular visitation by the local community it serves.

Objectives

- a. To provide a range of retail, commercial, entertainment, recreation and community uses to serve the needs of the wider community, promote an active and vibrant town centre, and maximise employment opportunities within Menangle Park.
- b. To establish a compatible land use mix within the precinct.
- c. To encourage employment uses that serve the local community.
- d. To achieve a well-landscaped and useable public domain to encourage community use, street activation and connection to surrounding areas.
- e. To provide a range of housing typologies that provide a diversity in affordability and housing choice.

- f. To provide an interconnected street network with block sizes and mid-block connections that maximise pedestrian permeability while facilitating large format retail uses.
- g. To consider potential future noise and amenity conflicts in the layout and location of Town Centre and future residential uses.
- h. To emphasise to the importance of local landscape features (Green Spine and Riparian Corridor), public open space, and community-facing buildings.
- i. To minimise at-grade carparking and optimise basement parking opportunities.
- j. To minimise expanses of pavement that are unshaded.

Controls

1. Designate and design one street as a pedestrian prioritised 'Main Street', positioning retail and community uses so that they orient towards it (refer to Figure 7.1).
2. Accentuate the main retail entrance with a Retail Public Domain Space: an activated plaza, pavement widening or other pedestrian-oriented open space (refer to Figure 7.2)
3. If a direct connection opportunity exists, locate surrounding buildings to ensure a visual connection between the Retail Public Domain Space and the Riparian Corridor (refer to Figure 7.2).
4. If a direct connection opportunity exists, provide a spatial connection between the Retail Public Domain Space and the Riparian Corridor (refer to Figure 7.2).
5. Provide contributory frontage - either active or residential - along the Main Street, the Riparian Corridor, the Green Spine, and any bounding local streets (refer to Figure 7.2).
6. Provide active uses at ground floor around the Town Centre's northern gateway that face the Main Street, Riparian Corridor and Green Spine (refer to Figures 7.1 & 7.2).
7. Where residential properties front the Riparian Corridor, separate those properties from the Riparian Corridor with a local road or shared zone (refer to Figure 7.8).
8. Where non-residential properties front the Riparian Corridor, provide a through-site link or public pathway between the buildings and the Riparian Corridor (refer to Figure 7.9).
9. Co-locate uses and facilities as much as possible to maximise the efficient use of space.
10. Ensure appropriate urban greening and shading.
11. Optimise integration of service vehicles and waste management so as to minimise movement conflicts and adverse residential and visual amenity impacts.
12. Servicing of commercial sites is to be designed to minimise the interaction of large, servicing vehicles and pedestrians within the Town Centre.

7.4. Public Domain



Figure 7.2 Public Domain Plan

The public domain of the Town Centre is defined by:

- ▶ Main Street - a pedestrian friendly environment that accommodates a mix of uses that interact at the street level.
- ▶ The centre’s integration with the adjacent Howes Creek – providing pedestrian connection and a sensitive design interface.

- ▶ A street network that supports walkability and cycling.
- ▶ A high-quality streetscape and embellished public places that encourage utilisation and regular visitations.

Objectives

- a. To provide a network of integrated and connected open space and public domain areas that strengthen the primary function of the Town Centre to serve its local community.
- b. To ensure that parks and plazas act as a focal point for the Town Centre and community activities.
- c. To provide high pedestrian amenity, ensuring walking and cycling within the Town Centre takes priority over traffic circulation and vehicle servicing.
- d. To encourage a healthy mix of retail, commercial, community and residential uses throughout the Town Centre.
- e. To incorporate a town square / civic plaza, adjacent to the Main Street, which provides an urban landscape setting and a civic focus for the community.
- f. To ensure service infrastructure does not adversely impact public domain amenity.

Controls

1. Design the landscaped setback to the Green Spine as public space (refer to Figures 7.2 and Figure 7.3).
2. Main Street is to have active street frontages with ground level retail and dining spilling into footpaths.
3. Footpaths are to be provided of an appropriate width to encourage active uses.
4. Land uses are to achieve a level of street interaction as specified in Figure 7.2.
5. Ground uses are to incorporate clear glass frontages to facilitate casual surveillance of street activity.
6. Landscaping and its ongoing protection and maintenance is to be integrated into the Town Centre's street network and shall include appropriate shade species to enhance the civic environment.
7. The public domain shall incorporate 'stopping places' such as small plazas and seating areas throughout the centre.
8. Stopping spaces and other public domain areas shall incorporate street furniture that is accessible and is located to encourage community interaction and active and/or public transport choices.
9. Provide co-ordinated street furniture and lighting that enhances the character of the Town Centre.
10. Provide street tree and open space planting that establishes generous shade for pedestrians.
11. Design all signage and advertising in a coordinated manner.
12. Crime Prevention Through Environmental Design principles are to be considered for all developments and public domain embellishments.

13. Ensure site servicing, loading facilities, waste storage and other infrastructure is designed to minimise adverse amenity and visual impacts on the public domain and on neighbours.
14. Maximise capture, storage and reuse of greywater, including the provision of stormwater detention and retention on-site.

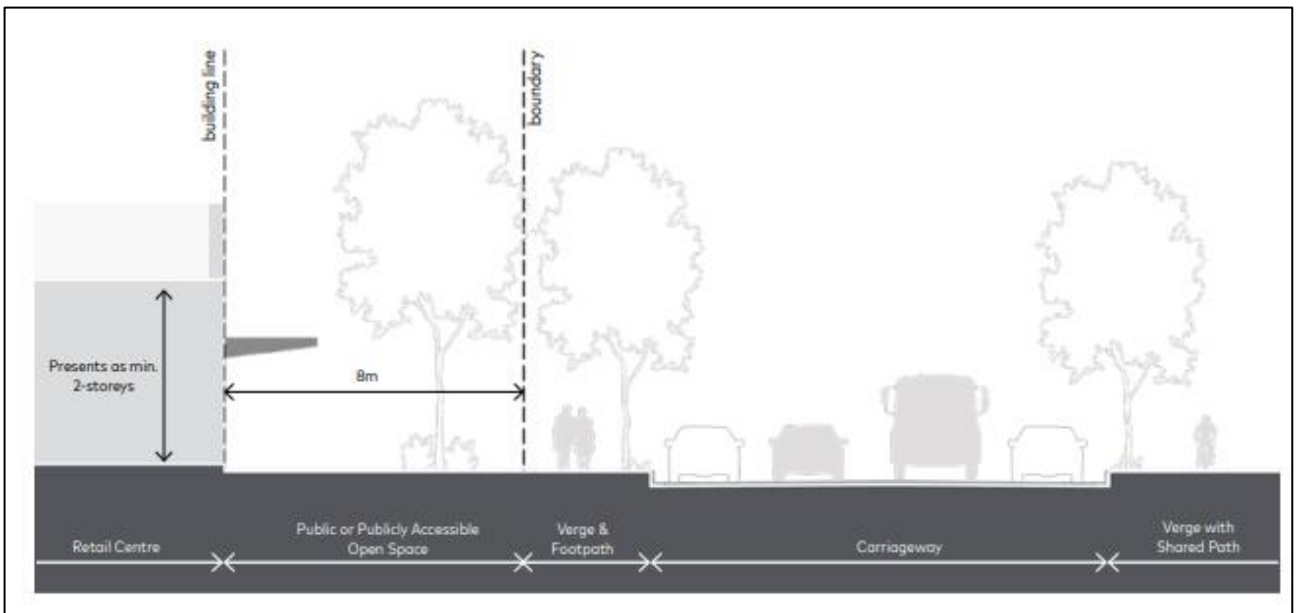


Figure 7.3 – Green Spine Interface

7.5. Built Form

Objectives

- a. To provide distinctive gateway buildings for the purpose of welcoming and marking the entry into the Town Centre.
- b. To establish a clearly defined Town Centre, differentiated from the rest of Menangle Park through the scale and intensity of development.
- c. To define streets and open spaces with buildings.
- d. To relate building heights to street functions and a comfortable urban scale of development.
- e. To provide a continuous street frontage along all key streets.
- f. To promote diversity and activity along the Main Street with a variety of frontage widths for retail shops.
- g. To integrate with framework tree planting in the public domain.

Controls

1. Building heights are to be provided in accordance with clause '4.3 – Height of Buildings' of the Campbelltown LEP.

2. Active street fronts, aligned with the street, are required on the ground level of all retail and commercial development. Active frontage uses can be defined as one of a combination of the following provisions at street level:
 - ▶ Entrance to retail
 - ▶ Shop front
 - ▶ Glazed or transparent entries to commercial and residential lobbies
 - ▶ Cafes or restaurant if accompanied by an entry from the street
 - ▶ Active office uses, such as reception, if visible from the street
 - ▶ Public buildings if accompanied by an entry
3. Corner buildings and frontages within the Town Centre are to be defined and are to be articulated by a verandah, balcony or transparent windows to encourage passive surveillance.
4. On corner sites, shop fronts are to wrap around the corner to maintain activation.
5. Weather protection for pedestrians is to be provided along Town Centre streets. Weather protection can take the form of awnings, shade sails and/or similar and is to maintain a feeling of openness.
6. Building services such as mechanical ventilation, roof plants and lift overruns should be screened from the public domain.
7. Position landmark buildings at the northern and southern gateways into the Town Centre, with a preference for non-residential uses at the northern gateway (refer to Figure 7.1).
8. Provide a range of building heights, up to a maximum of 6 storeys with a transition in heights to surrounding residential areas.
9. Building heights are to take into account view lines and solar access to the public domain.
10. All buildings in the Town Centre should be multiple storeys wherever possible.
11. Where non-residential buildings are required to be single-storey by function or feasibility, they should be designed to present as a being minimum two-storeys in apparent height (refer to Figures 7.3 & 7.4).
12. Residential uses are to be set back a minimum 3m from an adjoining street or public open space (refer to Figures 7.5 & 7.7).
13. Ground level non-residential uses are to be built to a maximum 0.5m setback from an adjoining street, except where a different setback is required by this DCP (refer to Figures 7.4 & 7.5).
14. The first level above ground shall follow the same setback as the ground level, regardless of its use (refer to Figure 7.5).
15. Provide a minimum 8m landscaped setback along the Green Spine (refer to Figures 7.1, 7.2 & 7.3).
16. A continuous awning shall be provided along all non-residential frontages along Main Street.
17. Where residential frontages are positioned on the same block as non-residential frontages on Main Street, they shall also provide a continuous awning. Ground floor setbacks may be reduced to accommodate this.

18. Provide the main pedestrian access into the retail centre directly from Main Street, without needing to cross a car park.
19. Retail entrances are to be fully accessible from bounding streets, without the use of a lift.
20. Waste storage and collection areas are to be accommodated within buildings where possible, and designed appropriately to minimise adverse impacts, in particular within mixed use developments.
21. All buildings shall integrate with framework planting provided in the public domain.
22. The creation of Through Site Linkages is encouraged where appropriate.
23. Where suitable, large format retail destinations are to be sleeved with premises for specialty shops or other uses.
24. Where deemed necessary by Council, developments in the Town Centre may require environmental assessments to guard against wind tunnel effects and adverse conditions resulting from prevailing wind strength.

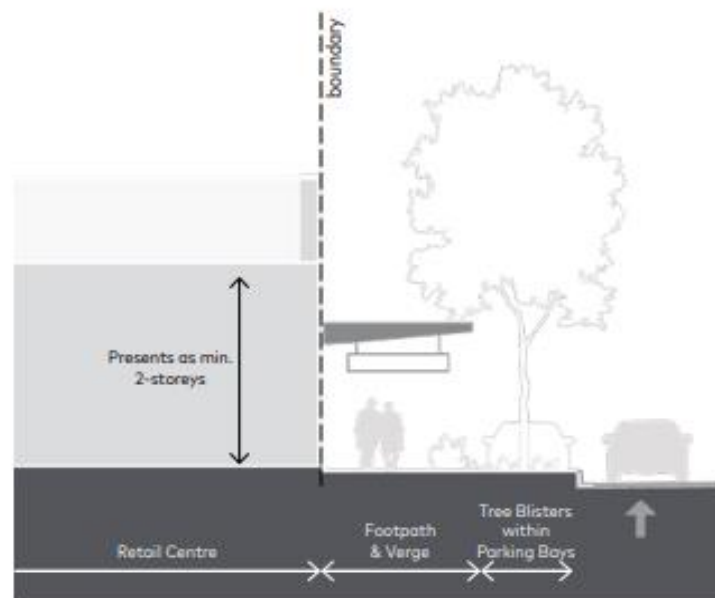


Figure 7.4 – Main Street Section – Retail Interface



Figure 7.5 – Main Street Section – Non-Residential Interface

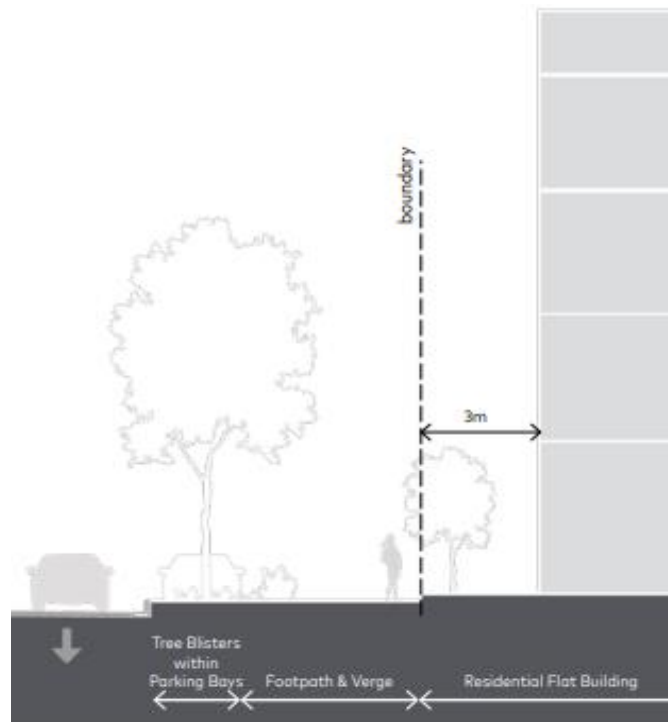


Figure 7.6 – Main Street Section – Residential Flat Building Interface

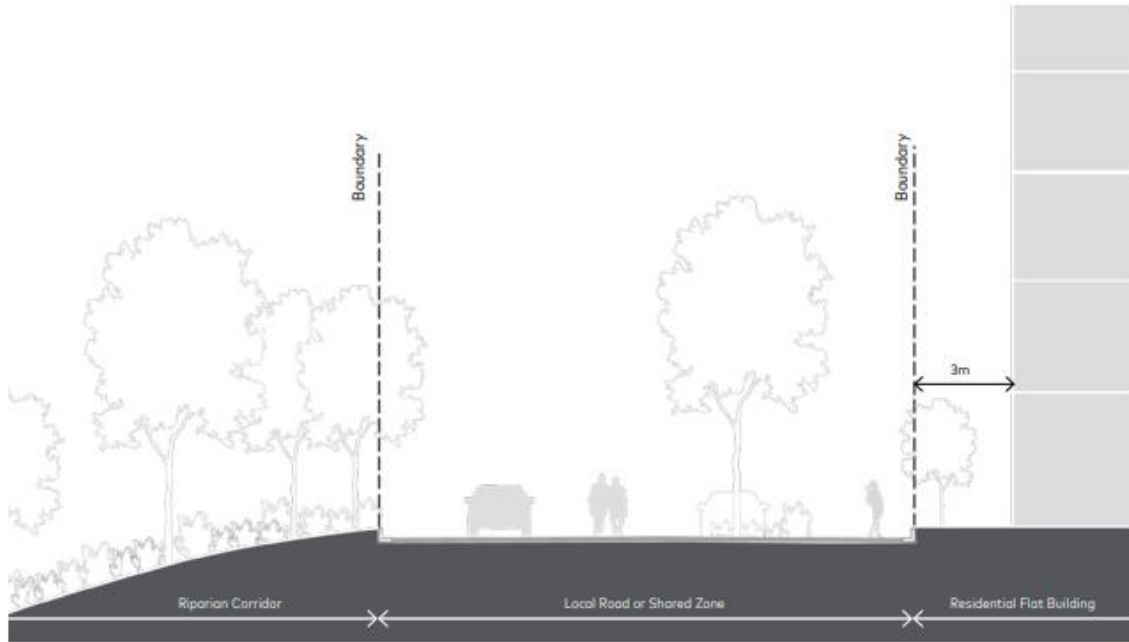


Figure 7.7 – Riparian Corridor Section – Residential Interface

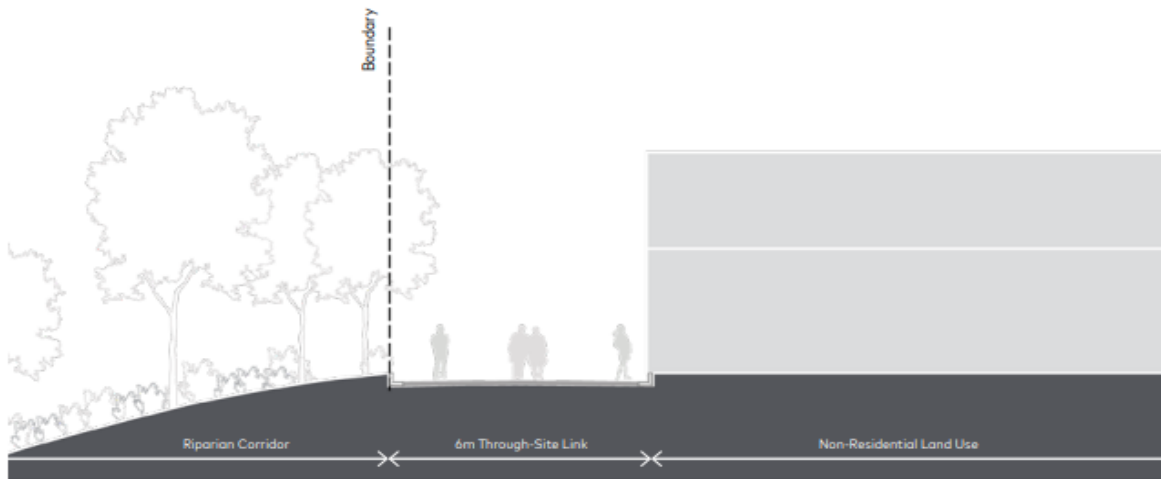


Figure 7.8 – Riparian Corridor Section – Non-Residential Interface

7.6. Setbacks and Street Activation

Objectives

- a. To ensure that buildings are delivered in a cohesive manner which reflect the desired future character of the Menangle Park Town Centre.
- b. To enable land uses that encourage street activation and facilitate passive surveillance.
- c. To create a well-designed interface to the public domain to encourage use and enjoyment of the precinct by ensuring an active street frontage is nominated street / pedestrian edges.
- d. To create a walking environment that is interesting for pedestrians and connects to the centre's surrounds.
- e. To ensure that building design encourages natural surveillance.
- f. To integrate setbacks and street activation with public domain planting.

Controls

1. Buildings may be built to the boundary line along Main Street.
2. Building setbacks elsewhere within the Town Centre may be assessed on merit.
3. Building facades are to incorporate projections and modulation to create a varied and engaging streetscape.
4. Projections beyond the boundary line may include awnings, verandahs, balconies, roof overhangs and blade walls, provided these are provided in accordance with a standard framework that applies to all buildings.
5. Residential development above the ground floor (i.e. shop top housing) is to be further setback from the commercial / retail building façade.
6. Primary activation must not have vehicle access and residential/office lobbies and servicing occupy more than 20% of the total frontage.
7. On secondary activation points, access to lobbies is encouraged.
8. An active street frontage is not required for any part of the building to be used for the following:
 - ▶ Entrances and lobbies,
 - ▶ Access for fire services,
 - ▶ Vehicular access.
9. All building setbacks and articulation elements shall have regard to public domain planting.
10. Cross street activation is encouraged where appropriate.

7.7. Active Edges

Types of 'Active' Edges in Urban Design

- ▶ **Retail and commercial Active Edge:** A Retail Active Edge refers to street frontages where the ground floor is predominantly occupied by retail shops, offices, restaurants, cafes, and services. These edges encourage pedestrian activity by providing vibrant, engaging storefronts that attract people to walk, shop, and interact.
- ▶ **Residential Active Edge:** A Residential Active Edge pertains to street frontages with residential buildings that feature elements such as front gardens, and balconies that engage with the street. These edges create a sense of community and safety.

Objectives

- a. To ensure that active edges are incorporated into the development to enhance the vibrancy, safety, and attractiveness of the urban environment, encouraging pedestrian activity and social interaction.

Retail and Commercial Active Edge

Controls

1. Ground floor frontages along designated streets (see figure 7.1) must be predominantly occupied by retail shops, offices, restaurants and other services.
2. Storefronts should be transparent with large display windows to enhance visibility and engagement.
3. Entrances to retail spaces must be directly accessible from the street to encourage pedestrian movement.
4. Commercial uses should have direct access to the street, and any outdoor areas should be designed to encourage public use.
5. Carparking Buildings should feature active frontages with elements such as outdoor seating, transparent facades, and prominent entrances.

Residential Active Edge

Controls

1. Residential buildings fronting the street must incorporate elements such as, front gardens, balconies, or verandas that engage with the street environment.
2. Ground floor residential units should have direct access to the street, enhancing the sense of community and safety.
3. Design features should promote passive surveillance, allowing residents to observe street activity.

General Requirements

Controls

1. All active edges must include high-quality, durable materials and finishes that enhance the streetscape.
2. Signage should be designed to complement the active edge, providing clear information without overwhelming the facade.
3. Lighting should be incorporated to enhance safety and visibility, particularly during evening hours.
4. Landscaping elements such as trees, planters, and street furniture should be included to create a pleasant pedestrian environment.

7.8. Solar Access and Shading

Objectives

- a. To protect the solar amenity of the Town Centre and ensure that public places receive an adequate mix of sunlight and shading.

Controls

1. Built form is to be considerate of solar access to open space, Main Street and Howes Creek riparian corridor and minimise overshadowing of adjoining lands and balance seasonality objectives.
2. Any Development Application for the construction of buildings is required to submit detailed solar access diagrams for between 9am and 3pm mid-winter to demonstrate sufficient solar access is maintained to public and private spaces and streets.
3. Any significant expanses of pavement shall be accompanied by a shading strategy.

7.9. Mobility and Access

Objectives

- a. To facilitate active transport and support healthy communities.
- b. To create a slow-speed environment which prioritises pedestrians and provides for traffic calming measures.
- c. To provide a suitable parking mix and opportunity for alternative modes of transport such as car share and bicycle.
- d. To enhance the connectivity of the neighbourhood's pedestrian movement.
- e. To reduce car dependency and encourage the use alternative modes of transport, especially for trips to the centre by the local community it serves.

Controls

5. Vehicle movements and intersections are to be provided in accordance with the Vehicle Movement and Intersection Plan at Figure 7.9.

6. Service access shall be positioned as close to directly off the collector road (adjacent the Green Spine) as possible (refer to Figure 7.9).
7. Dedicated laneways should be used to provide access to parking areas, loading docks and waste collection areas while minimising traffic along the Main Street and/or surrounding local roads.
8. Laneways are to be designed to accommodate heavy vehicles where access to loading areas and waste collection is required.
9. Carparking rates for the Town Centre are to be provided in accordance with Part 5 of the Campbelltown (Sustainable City Development Control Plan) 2015.
10. Limited on street carparking may be provided on Main Street, Cummins Road, and streets bordering the Town Centre to enhance street life and surveillance.
11. At-grade parking areas are to be minimised and generally located behind building lines and within the centre of street blocks. At-grade parking areas are to have an integrated planting and shading strategy.
12. Council may evaluate temporary/transitional parking solutions if an application includes a staged plan demonstrating adherence to the specified parking location principles.
13. Conceal loading, parking and blank walls with active uses or contributory residential sleeving where possible (refer to Figures 7.1 & 7.10). Where such concealment is not possible, provide landscaped buffers for interim screening and show that adequate site dimensions have been provided for sleeving to be incorporated in future.
14. Opportunities for shared parking provision for complementary uses within the Town Centre are to be considered.
15. Provision for on-demand / rideshare transport options (e.g., nominated drop-off and pick-up locations) are to be incorporated into the street network.

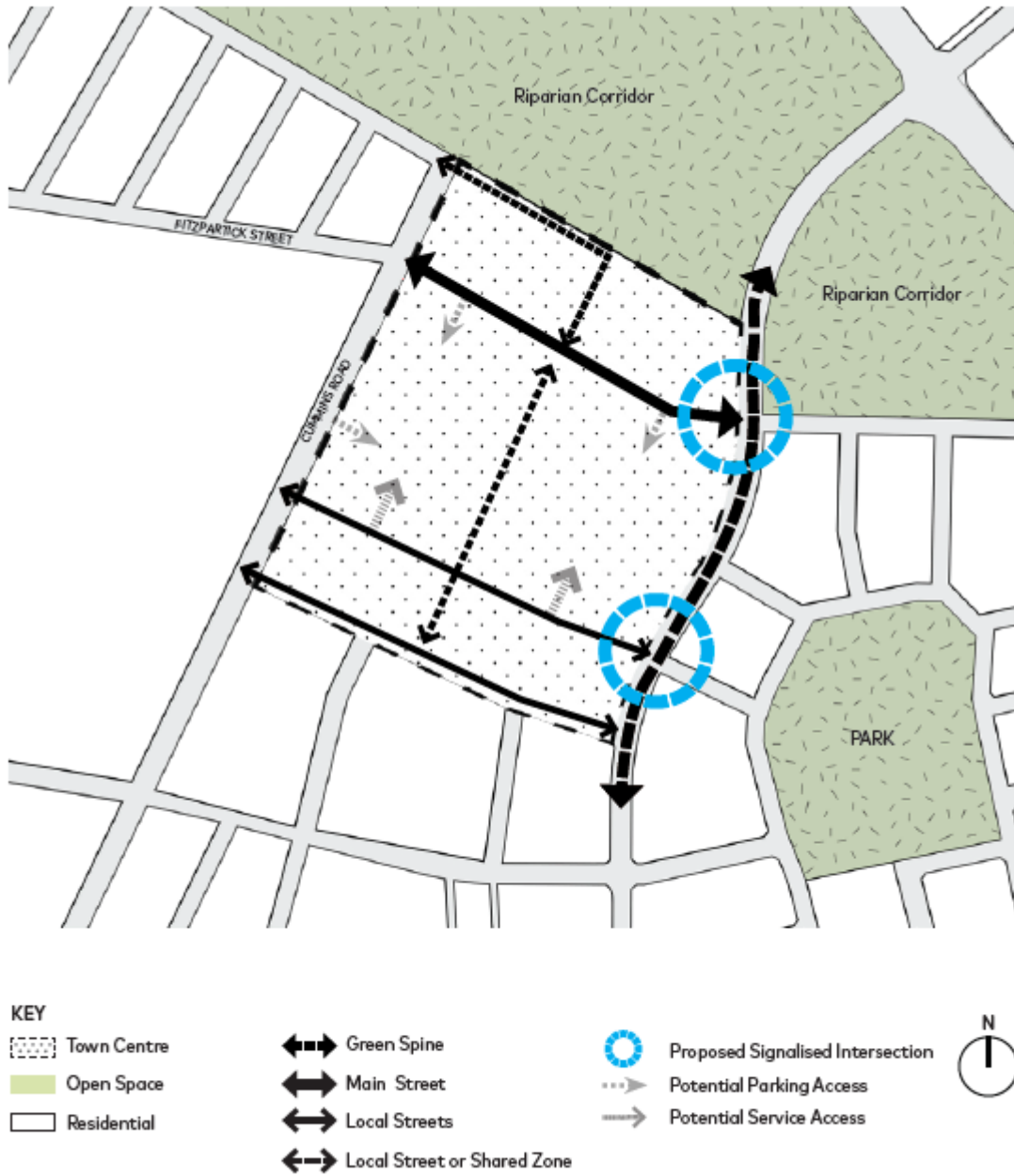


Figure 7.9 Vehicle Movement and Intersection Plan

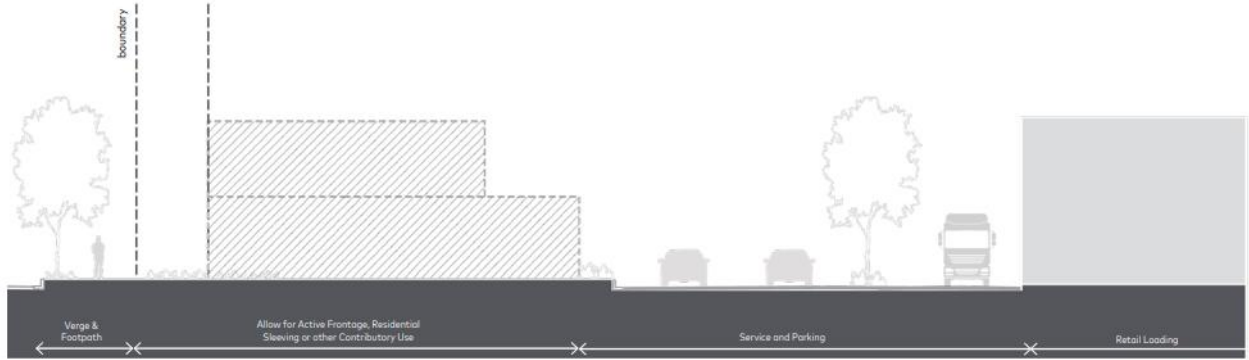


Figure 11: Service & Parking Zone Sleeving

Figure 7.10 Service and Parking zone sleeving

8.

Appendices

Appendix A Glossary

“Access Streets and Laneways” provide local residential access to a small number of dwellings and serve a shared vehicular-pedestrian-cyclist use. They are intended to encourage a safe, low vehicle speed environment in which the residential function is dominant. Access streets function at the lowest level of the road hierarchy. They generally have development on one side and are located along drainage or open space reserves or along access-denied roads. The construction and dedication of access streets is the responsibility of the developer.

“Articulation zone” includes verandahs, porches, awnings, shading devices, bay windows, pergolas and the like. A carport is not considered part of the articulation zone.

“Active Frontages” are defined as one or a combination of the following:

- ▶ 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
- ▶ Public building if accompanied by an entry.

“Attic” means a room within the main roof space of a building that has a 1.5m minimum wall height at edge of the room, a minimum 30-degree ceiling slope and does not incorporate or access a balcony.

“Arterial roads” are major roads that carry the majority of inter-regional traffic. Vehicular access from adjacent land is denied ensuring both the efficiency of the road and the safety of road users.

“Building footprint” means the area of land measured at finished ground level that is enclosed by the external walls of a building.

“Collector roads” are roads marked as such on the Precinct Road Hierarchy figure in the relevant Precinct Schedule. They are the main internal roads that carry local traffic through the residential neighbourhoods to the sub-arterial and arterial roads, and provide access to major attractors within the precinct such as retail, commercial and educational facilities.

“Flood Planning Levels (FPLs)” are the combinations of flood levels (derived from significant historical flood events or floods of specific AEPs) and freeboards selected for floodplain risk management purposes, as determined in management studies and incorporated in management plans. Flood planning area is the area of land below the FPL and thus subject to flood related development controls. The concept of flood planning area generally supersedes the “flood liable land” concept in the 1986 Manual. Flood Prone Land is land susceptible to flooding by the PMF event. Flood Prone Land is synonymous with flood liable land.

“Floor Area” for a dwelling house means the sum of the areas of each storey of the dwelling house and any carport, garage, balcony, deck, patio, pergola, terrace or veranda measured at a height of 1.4m above each floor level that is within the outer face of –

- ▶ the external walls of the dwelling house, and
- ▶ the walls of the carport, garage, balcony, deck, patio, pergola, terrace or veranda But does not include the following –
- ▶ any part of an awning, blind or canopy that is outside the outer wall of a building, the eaves.

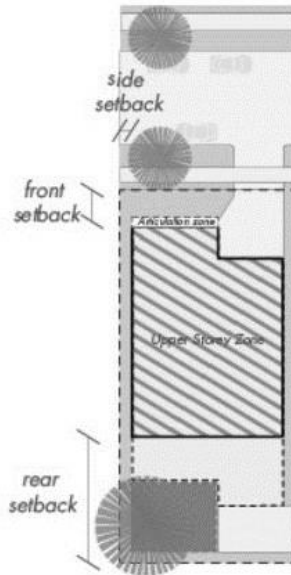


Figure 5: Floor Area

“Landscaped area” means any part of a site, at ground level, that is permeable and consists of soft landscaping, turf or planted areas and the like. It does not include driveways, parking areas, hard paved drying yards or other service areas, swimming pools, tennis courts, undercroft areas, roofed areas (excluding eaves <450mm to fascia board), outdoor rooms, balconies, rooftop gardens, terraces, decks, verandahs and the like.

“Outbuilding” means any of the following:

- a. Balcony, deck, patio, pergola, terrace or veranda detached from a dwelling,
- b. Cabana, gazebo, cubby house, garden shed, greenhouse, shed
- c. Carport, detached garage,
- d. Shade structure that is detached from dwelling,
- e. Detached studio.

“Pervious area” means the parts of the site where water is able to permeate the soil, and excludes any areas that are paved, roofed or otherwise covered with impervious materials.

“Principal dwelling” means the largest dwelling house on a lot, measured by gross floor area.

“Principal private open space” means the portion of private open space which is conveniently accessible from a living zone of the dwelling, and which receives the required amount of solar access.

“Private open space” means the portion of private land which serves as an extension of the dwelling to provide space for relaxation, dining, entertainment and recreation. It includes an outdoor room.

“Riparian Corridor” means the riparian protection area as shown on the Riparian Protection Areas map within your Local Environmental Plan or applicable SEPP.

“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:

- ▶ Any basement (that is not above existing ground level),
- ▶ Any part of an awning that is outside the outer walls of a building and that adjoins the street frontage or other site boundary,
- ▶ Eaves,
- ▶ Unenclosed balconies, decks, alfresco, pergola and the like

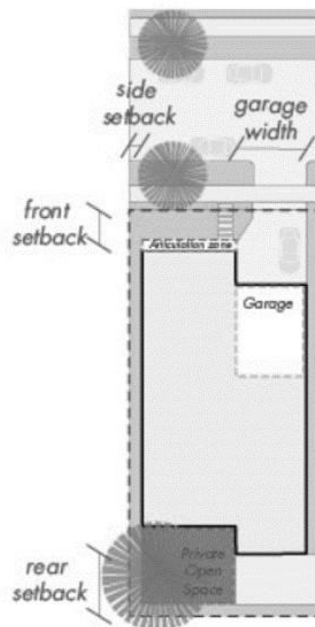


Figure 10 Site Coverage

“Sub-arterial roads” are roads marked as such on the Precinct Road Hierarchy figure in the relevant Precinct Schedule. Sub-arterial roads link regional and local traffic routes. Access from private properties is generally denied to these roads (except in special circumstances) for reasons of traffic safety and to maintain the capacity and efficiency of the road system. Council is normally responsible for the acquisition and construction of sub-arterial roads.

“Town Centre Streets” are roads marked as such on the Precinct Road Hierarchy figure in the relevant Precinct Schedule. They are specially designed to create a pleasant and comfortable pedestrian environment. Amenity and safety is to be maintained through wide shaded footpaths, traffic calming measures and pedestrian crossings.

“Walking Distance” is typically 400m or a 5-minute walk from a local destination or bus stop, or 800m or a 10 minute walk from a train station.

Appendix B. Riparian Protection Area Control

Introduction

This precinct immediately adjoins the riparian corridor to the south separated by, and benefitting from, the Spring Farm Parkway. This precinct is characterised by the vegetation communities and native habitats found naturally along Howes Creek. The riparian corridor connects the community with healthy, natural recreation opportunities.

Approximately 540 residents (160- 200 dwellings) within a slightly lower density environment than the Town Centre precinct will benefit from close proximity to natural amenity and daily conveniences. This is the most diverse of the precincts delivering larger lots on slope, through to medium density product along the centrally located Green Spine and local parks. Key worker and affordable housing can be accommodated near the convergence of Spring Farm Parkway and the Green Spine.

A diverse mix of passive and active recreation spaces include district level play areas, walking and cycling trails and places to observe nature. Bridges, walkways and lookouts connect the areas of amenity whilst controlling access to water bodies, ensuring preservation of the natural environment.

This precinct provides critical north/south connectivity for pedestrians and cyclists. The Green Spine and Spring Farm Parkway park to riparian underpass create safe, attractive movement corridors celebrating the natural feature of this precinct. A commitment to best practice riparian corridor management will see the implementation of a vegetated buffer to protect, restore and maintain ecological functions.

7.10. Land to which these Controls Apply

This Appendix applies to the land that contains, or is adjacent to, a riparian corridor, as defined in this DCP.

Controls

Applications are to refer to the Guidelines for Riparian Corridors prepared by the NSW Office of Water, July 2012. These guidelines contain the outcomes and requirements for development on land containing a riparian protection area in the South West Growth Centre Precincts, to which the Menangle Park DCP applies.

Appendix C. Indicative Species List

Species	Common name			Height	Comments
SMALL					
<i>Arbutus unedo</i>	Irish Strawberry Tree	E	exotic	H:6-8m	Native to the Mediterranean region and Western Europe, White flower, fruit
<i>Callistemon salignus</i>	Willow Bottlebrush	E	native	H:6-8m	Forest and Woodlands, usually damp places, White to yellow flower
<i>Elaeocarpus reticulatus</i>	Blueberry Ash	E	native	H:6-8m	from rainforest-like environment, moist areas around watercourses, Tall Eucalypt Forests
<i>Lagerstroemia indica</i>	Crepe Myrtle	D	exotic	H:6-8m	often multi-stem, bark is prominent feature, prefers subtropical environment, Purple flower, autumn colour
<i>Melaleuca decora</i>	White Feather Honey Myrtle	E	native	H:6-8m	Periodic inundation, "River Flat Eucalypt Forest", White ornamental flowers
<i>Melaleuca linariifolia</i>	Paperbark	E	native	H:6-8m	"Sydney Freshwater Wetlands", White flowers



Arbutus unedo



Callistemon salignus - rubra



Elaeocarpus reticulatus



Lagerstroemia indica



Melaleuca decora



Melaleuca linariifolia



Acer buergerianum



Acmena smithii

Species	Common name		Height	Comments
MEDIUM				
<i>Acer buergeranum</i>	Trident Maple	D exotic	H:8-10m	From Eastern China and Korea, cool climate, Autumn colour
<i>Acmena smithii</i>	Lillypilly	E native	H:8-12m	temperate to tropical climate, adequate summer moisture
<i>Angophora bakeri</i>	Narrow-leaved Apple	E native	H:10-12m	Good ornamental tree, well drained soils
<i>Brachychiton populneum</i>	Kurrajong	E native	H:10-15m	well drained soils
<i>Corymbia eximia</i>	Yellow Bloodwood	E native	H:10-12m	Temperate to subtropical
<i>Cupaniopsis anacardioides</i>	Tuckeroo	E native	H:8-12m	Coastal, temperate to subtropical
<i>Eucalyptus haemastoma</i>	Scribbly Gum	E native	H: up to 15m	Dry sclerophyll woodland, shallow infertile soils
<i>Fraxinus oxycarpa</i>	Desert Ash	D exotic	H:12-14m	Only on rich soils
<i>Harpulia pendula</i>	Tulipwood	E native	H:8-12m	Coastal rainforest tree, needs moisture, no exposition to wind
<i>Hymenosporum flavum</i>	Native Frangipani	En native	H: 8-10m	Coastal Bush Forest of Eastern Australia



Angophora bakeri



Brachychiton populneum



Corymbia eximia



Cupaniopsis anacardioides



Eucalyptus haemastoma



Fraxinus oxycarpa



Harpulia pendula



Hymenosporum flavum

Species	Common name		Height	Comments
<i>Jacaranda mimosifolia</i>	Jacaranda	D exotic	H:12-15m	Prefers a warm sheltered position, late deciduous
<i>Liquidambar styraciflua</i> 'Parasol'	Parasol Sweet Gum	D exotic	H:12-14m	autumn colour
<i>Lophostemon confertus</i>	Brushbox	E Native	H:12-15m	
<i>Melaleuca quinquenervia</i>	Broad-leafed Paperbark	E native	H:8-12m and more	Textured bark, prefers heavy soil along watercourses and swamps, "Sydney Freshwater Wetlands"
<i>Melaleuca leucadendra</i>	Broad Leaf Paperbark	E native		
<i>Melaleuca bracteata</i>	Black tea-tree	E native		On heavier inland soils in depressions
<i>Nyssa sylvatica</i>	Tupelo	D exotic	H:12-15m	Slow growing, cool temperate, performs well on elevated sites, Autumn colour
<i>Pistacia chinensis</i>	Chinese Pistachio	D exotic		Autumn colour



Jacaranda mimosifolia



Liquidambar styraciflua



Lophostemon confertus



Melaleuca bracteata



Melaleuca leucadendron



Melaleuca quinquenervia



Nyssa sylvatica



Pistacia chinensis

Species	Common name		Height	Comments
<i>Pyrus calleryana</i> 'Chanticleer'	Callery Pear	D	exotic	H:10-12m Cool temperate to temperate, free draining soils, Autumn colour
<i>Sapium sebiferum</i>	Chinese Tallow Tree	D	exotic	H:8-12m Temperate climate, prefers well drained soils, Autumn colour
<i>Tristaniopsis laurina</i> 'Luscious'	Water Gum	E	native	H:10-12m
<i>Zelkova serrata</i>	Japanese Zelkova	D	exotic	H:10-12m From western Asia, cool moist temperate, Autumn colour



Pyrus 'Chanticleer'



Sapium sebiferum



Tristaniopsis



Zelkova serrata

Species	Common name		Height	Comments
LARGE				
Angophora floribunda	Rough-barked Apple	E native	H:16-18m	Prefers well drained soils and sheltered situation, "River flat Eucalypt Forest"
Angophora costata	Smooth-bark Apple	E native	H:18-20m	Impressive, landmark tree
Angophora subvelutina	Red Apple	E native	H:18-20m	
Corymbia maculata	Spotted Gum	E native	H:25-30m	
Eucalyptus crebra	Narrow-leaved Ironbark	E native	H:16-18m	"Cumberland Plain"
Eucalyptus punctata	Grey Gum	E Native	H:18-20m	
Eucalyptus sideroxylon	Mugga Ironbark	E Native	H:16-18m	Large tree
Eucalyptus tereticornis	Forest Red Gum	E Native	H:20-25m	"River flat Eucalypt Forest"

3.7 Street Tree Masterplan

Refer to attachment L100



Angophora costata



Angophora floribunda



Angophora subvelutina



Corymbia maculata



Eucalyptus crebra



Eucalyptus punctata



Eucalyptus sideroxylon



Eucalyptus tereticornis

