Draft Schedule 8

South Creek West Sub Precinct 5 (Part)

Camden Growth Centre Precincts Development Control Plan

May 2024

Contents

Figures

Part 1 - Introduction

1.1 Name and Application of this Schedule

This Schedule forms part of the *Camden Growth Centre Precincts Development Control Plan* (also referred to as 'the DCP').

This Schedule and related amendments to the DCP give effect to the provisions of this DCP for land within the Cobbitty Precinct as shown on the Land Application Map (Figure 1.1).

1.2 Structure of this Schedule

This Schedule should be read in conjunction with the main body of the DCP and is in addition to the main body of the DCP.

In the event of **any inconsistencies** between this Schedule and the main body of this DCP, this Schedule takes precedence. Table 1 summarises the structure of Schedule 8 Cobbitty Sub-Precinct 5.

Table 1 - Structure of this schedule

Part	Summary
1 – Introduction	Identifies the land to which this Schedule applies.
2 – Development Planning	Establishes an overall vision and Indicative Layout Plan (ILP) for Precinct 5 (Part). Provides Precinct specific figures that support the controls in Part 2 of the main body of the DCP in relation to Precinct 5 (Part).
3 – Centres Development Control	Provides specific objectives and controls that applies to land within the Neighbourhood Centre identified n the ILP. These controls are in addition to those in Part 5 of the DCP.
4 – Site Specific Controls	Specific objectives and controls for development in certain parts of the Precinct.

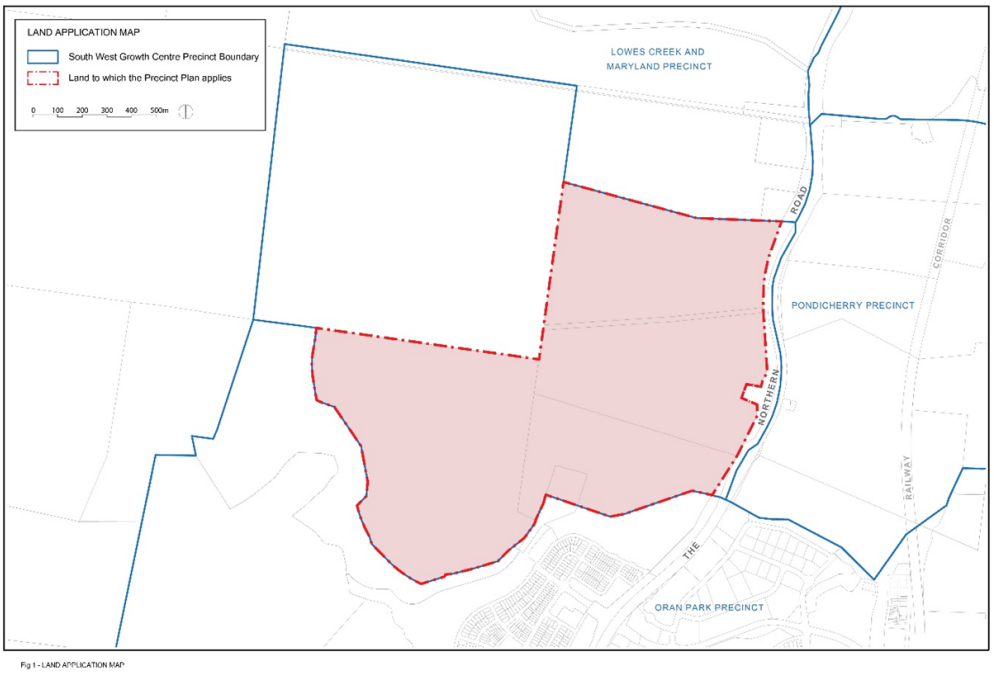

Fig 1 - LAND APPLICATION MAP

Figure 1.1 – Land Application Map

Part 2 - Development Planning and Design

2.1 Cobbitty Sub-Precinct 5 – Precinct Planning Vision

Vision

The vision for Cobbitty Sub-Precinct 5 is to deliver a high-quality, sustainable, vibrant master planned community which has been intricately designed to intertwine the new urban environment with the picturesque semi-rural character for which the Macarthur Region, and particularly the Cowpastures, is renowned. The urban design for the site has been shaped by the unique existing natural characteristics and long history of the site, yet still achieves a coherent masterplan for the development enabling easy wayfinding and efficient land use integration.

Natural features

The most prominent natural features are the two riparian corridors that traverse the site creating natural amphitheatres, and the ridgeline which cradles the southern boundary of the development. The specialist studies prepare for the he site determined the environmental and historical significance of these features, with both the riparian corridors and the ridgeline containing remnant pockets of the endangered Cumberland Plain Woodland while there is potential for Aboriginal heritage sites and artefacts along creek lines.

Urban design

The urban design for Cobbitty has incorporated these valuable landscape elements into the masterplan, with the riparian corridors becoming lush, leafy spines of the community whilst the natural amphitheatres shape the development to enable scenic views over the Precinct and beyond. Retaining and celebrating these features was key in the vision for Cobbitty, which seeks to preserve some of the semi-rural and bushland character of the site to provide the future community with a unique setting while simultaneously respecting heritage and ecology. Site specific design controls will be adopted to ensure future development employ attractive built forms and materials that complement the beauty of the surrounding landscape. Accentuating the natural characteristics of the site within the urban design is additionally intended to create a unique identity for the community, encouraging a sense of pride and a strong connection to place; people living in Cobbitty will be smart, healthy and well balanced.

Riparian corridors and vegetation

The riparian corridors have been integrated into the wider open space network for Cobbitty, which has been strategically designed to span the entire Precinct, ensuring all dwellings are in proximity to parks and green spaces which will improve the quality of life for residents both physically and mentally. The vegetation within the vast open space network combined with street trees will contribute to creating a leafy canopy cover over the Precinct which will mitigate the impacts of the urban heat island effect while also providing ecological and aesthetic benefits, furthering reinforcing the desired vision of Cobbitty being a community that is entwined with nature. This is further improved by the retention of water in the landscape that will assist with the future community connection with place and aid in creating a micro climate to cool the area during the warmer summer months. The combination of these measures ensures that there is resilience to climate change and measures to address heat island impacts.

Pedestrian and cycle links

The pedestrian and cycle links within the open space network further reinforce the exceptional permeability afforded by the thoughtfully designed road network of the Precinct, which promotes walkability and eases commutes by providing quick and direct routes to the Neighbourhood Centre and to The Northern Road, which connects the Precinct to the wider region. Certain roads have

been strategically positioned to maximise views, allowing the community to enjoy the scenic landscapes, reinforcing and strengthening the strong sense of place and the interface of the rural and built environments.

Neighbourhood Centre

The positioning of the Neighbourhood Centre central to the larger natural amphitheatre on flatter land provides a central focus for the future community's needs along with the colocation of a primary school, playing fields and other facilities that reinforce the space as the social heart of the community. The local centre is designed to maximise socialisation and strengthen community building. The higher density developments encircling the Neighbourhood Centre will contribute to the walkability and enhance accessibility which adds to the vibrancy of the place.

Objectives

A new planning framework has been prepared for Cobbitty Sub-Precinct 5 (Part), which aims to achieve the following objectives:

a. To facilitate high quality urban development that meets environmental sustainability objectives.

b. To protect and enhance riparian corridors, significant vegetation and natural features by thoughtfully incorporating them into the masterplan and creating a unique semi-rural character within the development.

c. To preserve the potential Aboriginal heritage sites located within the creek lines.

d. To ensure the new urban form promotes resilience to climate change and incorporates design measures to address the impacts of the urban heat island effect.

e. To create a community that is connected to nature by maximising opportunities for residents to access and enjoy the outdoors.

f. To ensure all development achieves a high standard of urban and architectural design quality which complements the unique setting of the development.

g. To promote housing that provides a high standard of residential amenity.

h. To create walkable neighbourhoods with good access to public transport.

i. To maximise access to local employment and business within the adjoining Major Centres.

j. To create a vibrant Neighbourhood Centre which serves as the heart of the community and fosters interactions.

Note: This section supports the objectives and controls in Part 2 of the DCP.

2.2 Referenced Figures

The figures included in this section are those referenced in the main body of Camden Growth Centre Precincts Development Control Plan as indicated in **Table 2**.

Table 2 Referenced figures

Referenced figure	Section in main body of the DCP
Figure 1.1 Land Application Map	1.2 Purpose of this plan
Figure 2.2.1 Indicative Layout Plan	2.2 The Indicative Layout Plan
Figure 2.2.2 Residential Structure	2.2 The Indicative Layout Plan
Figure 2.2.3 Flood prone land	2.3.1 Flooding
Figure 2.3.1 Precinct Road Hierarchy	3.3 Movement network
Figure 2.3.2 Pedestrian and Cycle Network	3.3 Movement network
Figure 2.3.3 2 Lane Sub-Arterial Road	3.3 Movement network
Figure 2.3.4 Collector Road	3.3 Movement network
Figure 2.3.5 Local Road	3.3 Movement network
Figure 2.3.6 Flexizone	3.3 Movement network
Figure 2.4.1 Open Space Network	2.2 The Indicative Layout Plan
Figure 2.5.1 Indigenous Cultural Heritage and Connection with Country	2.3.4 Aboriginal and European heritage
Figure 2.6.1 European Cultural Heritage	2.3.4 Aboriginal and European heritage
Figure 2.8.1 Odour	2.3.10 Odour assessment and control
Figure 2.9.1 Contamination Restraints	2.3.7 Site contamination
Figure 2.10.1 Biodiversity Constraints Map	2.3.5 Native vegetation and ecology
Figure 2.11.1 Bushfire risk and Asset Protection Zone requirements	2.3.6 Bushfire hazard management
Figure 2.12.1 Context of the environment of the Western Parkland City	4.1.3 Sustainable building design
Figure 2.12.1 Canopy cover to be achieved over car parking spaces	4.1.3 Sustainable building design
Figure 3.1.1 Location of Neighbourhood Centre	5.0 Centres Development Controls
Figure 3.1.2 Indicative layout plan for neighbourhood centre, school and playing fields	5.0 Centres Development Controls

Table 2 Referenced figures	
Referenced figure	**Section in main body of the DCP**
Figure 3.1.3 Urban design principles plan for neighbourhood centre	5.0 Centres Development Controls
Figure 3.1.4 Public Plaza precedent	5.0 Centres Development Controls
Figure 3.1.5 Entrance from shopping centre car park	5.0 Centres Development Controls
Figure 3.1.6 Main Street environment	5.0 Centres Development Controls
Figure 3.1.7 Traffic Circulation and Parking Plan	5.0 Centres Development Controls
Figure 4.2.1 Electricity Easements	2.3.8 Development of or adjacent to Electricity and Gas Easements

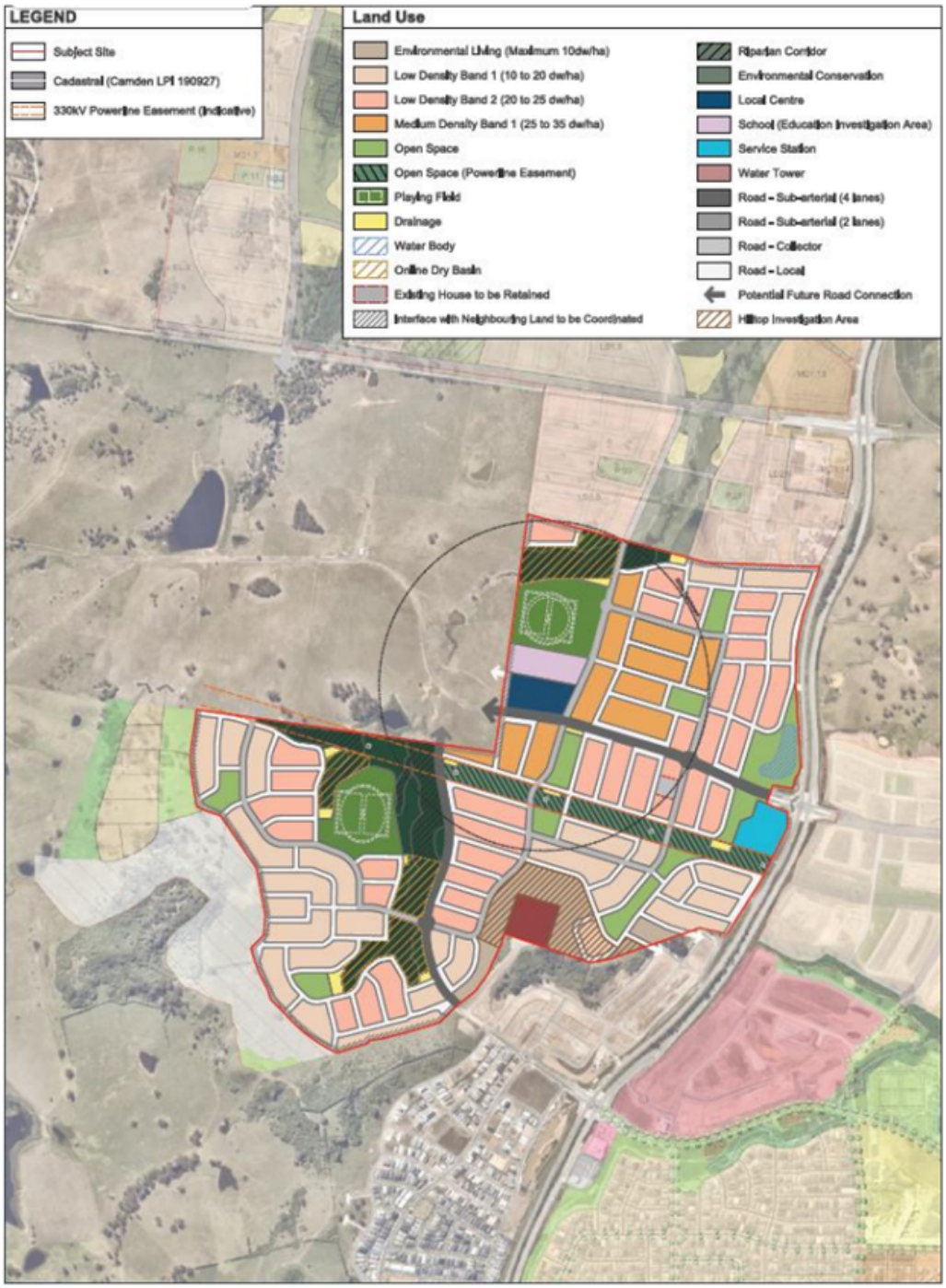

Figure 2.2.1 – Indicative Layout Plan

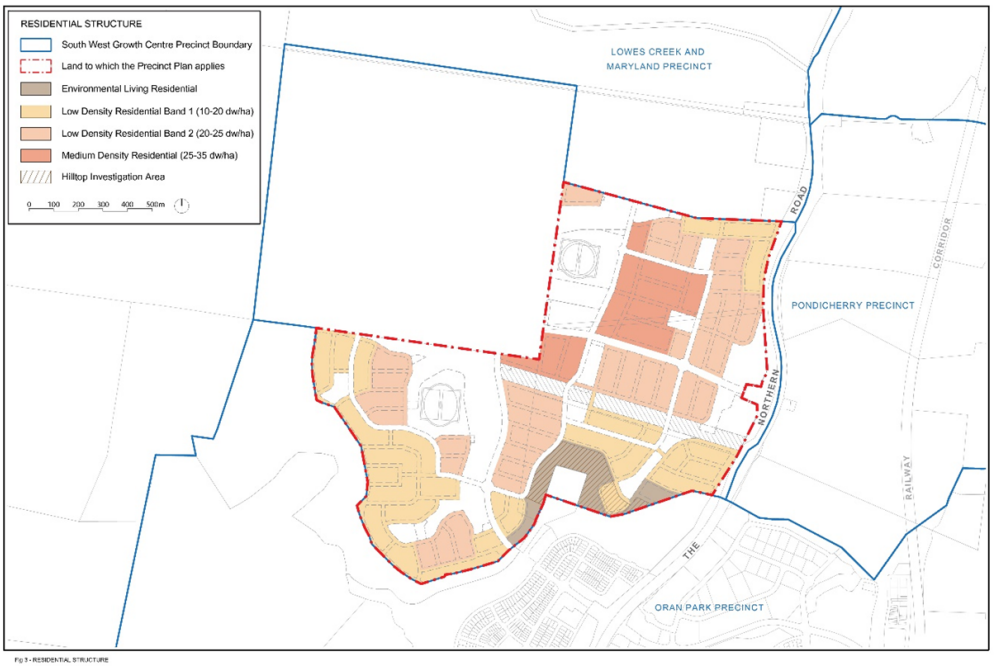

Figure 2.2.2 – Residential Structure

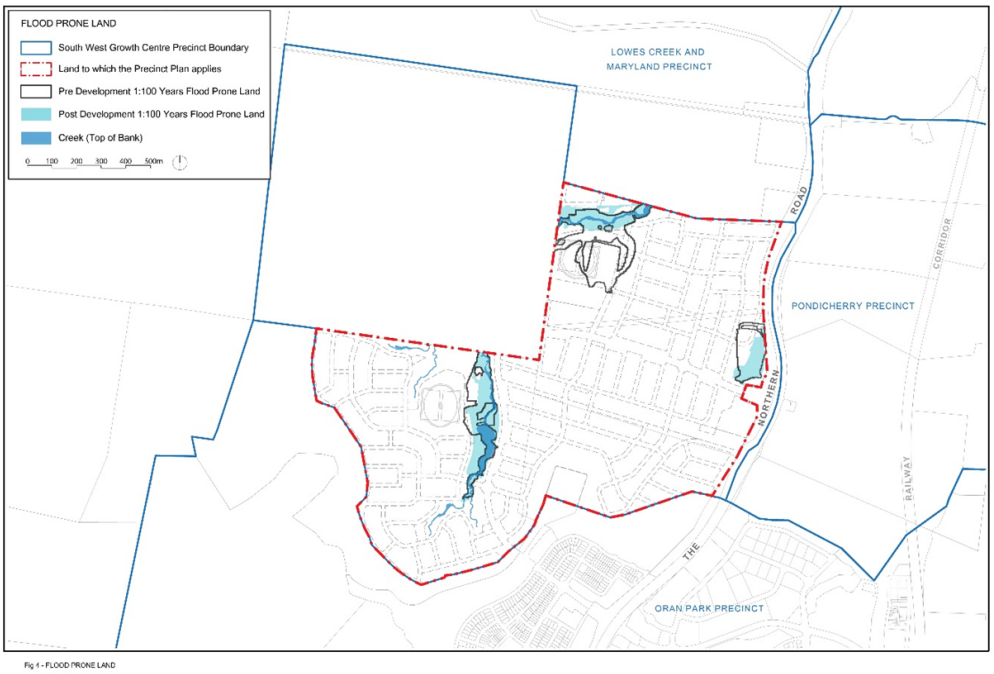

Figure 2.2.3 – Flood prone land

2.3 Street Design and Road Network

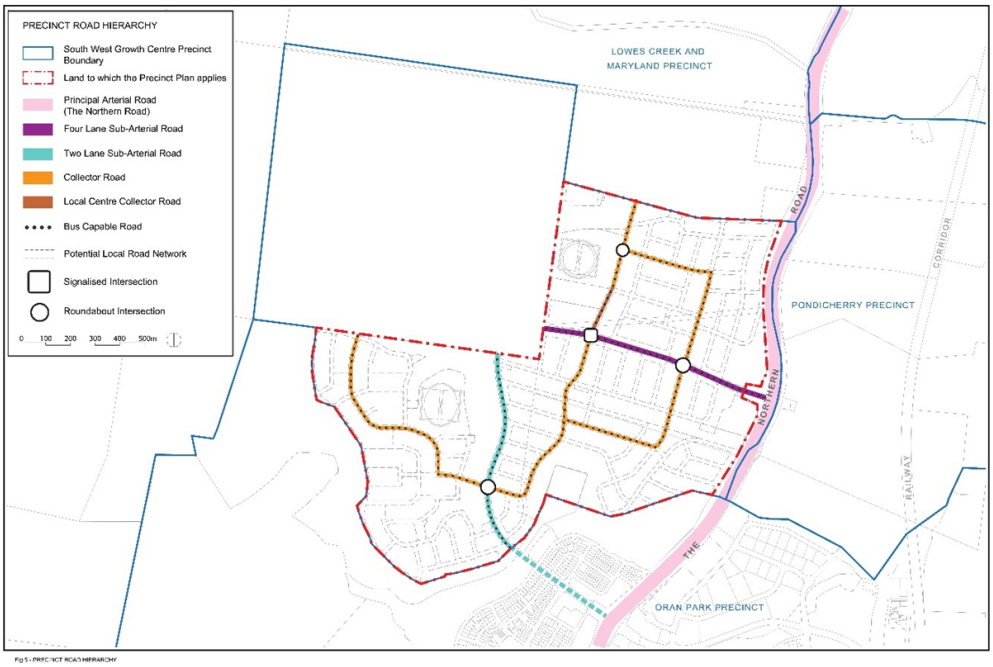

Figure 2.3.1 – Precinct road hierarchy

Objectives

a. To create a safe and permeable road network that caters for pedestrians, cyclists and vehicles.

b. To reflect the important and varied role streets play in urban environments, as public spaces, places or social interaction, service provision, movement connections, water and flood management, biodiversity and environmental functions.

c. Prioritise healthy living, including design to mitigate and adapt to heat, and design for active transport.

d. To encourage the use of public transport through the provision of integrated bus, pedestrian and cycle routes within the Precinct.

e. To provide opportunities to extend the pedestrian and cycle routes beyond the Precinct.

f. To ensure that new streets provide street trees and canopy cover to reduce the urban heat island effect.

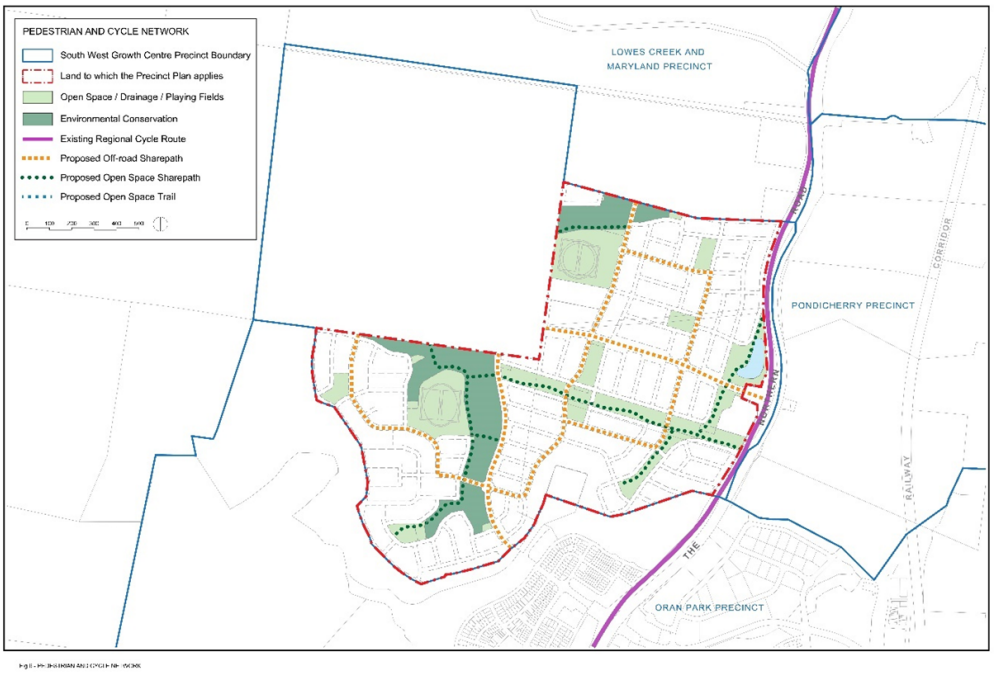

Figure 2.3.2 – Pedestrian and cycle network

Controls

1. The following cross sections identified in the DCP and Table 2 are expected for all sub-arterial, collector and local roads to ensure consistency of road layout and cross-section across the precinct.
2. The streetscape should incorporate materials with low heat conductivity and reflectivity, resulting in less solar absorption, including but not limited to lighter coloured materials for road pavement and footpaths.
3. Mature trees should be retained and incorporated into the subdivision and public domain design where possible, to contribute to the mature tree canopy cover in the neighbourhood to provide visually interesting streetscapes, improve air quality, and enhance tree canopy cover.
4. Appropriate plant species are to be selected for the site conditions with consideration given to trees providing shade in summer and allowing sunlight in winter and to provide habitat.
5. Lighting for streets should use energy efficient LED lighting.
6. Where possible, facilities should be provided along key streets for foot travellers (i.e. seating, shading, water fountains etc.).

Table 3 – Road typologies	
Street typology	**Role and modal priorities**
Sub-arterial Roads	Higher-order neighbourhood streets, that typically facilitates the connection of the arterial road network to other precincts and the Northern Road as well as local street networks. A greater emphasis on placemaking outcomes including active transport and pedestrian amenity. All sub-arterial roads should be bus capable to ensure that future transport connections can be provided across the precinct.
Sub-arterial Road connected to Dick Johnson Drive	Dick Johnson Drive is a key route to the south of Precinct 5 that provides access into the Oran Park Town Centre. The north-south sub-arterial road shall provide an extension to Dick Johnson Drive as a two-lane sub-arterial road reflective of Figure 2.3.3 and Table 4.
Collector Roads	Bisect Precinct 5 between the sub-arterial road and The Northern Road, enabling efficient distribution between all three north-south routes, especially for the local trips. The proposed width allows for bus capable travel lanes and shared paths on both sides of the road, which supports public transport, walking and cycling access and provides connections to key local destinations. The design of the collector roads shall incorporate the reduced street widths shown in Figure 2.3.4 and Figure 2.3.6.
Local Roads	Local roads divide up the blocks between the sub-arterial and collector roads. Slow speed environments within residential neighbourhoods that may promote community uses and informal sharing of street space between all street users are encouraged. They provide traffic calming and maximise verge space for street tree planting. The design of the local roads shall incorporate the reduced street widths shown in Figure 2.3.5 and Figure 2.3.6.

Table 4 - Two Lane Sub-Arterial (Typical Minimum Cross Section)

Verge (m)			Carriageway (m)		Verge (m)			Total (m)
Offset	Shared Path	Planting	Lane	Lane	Planting	Footpath	Offset	
0.6	2.5	1.5	5.6	5.6	1.5	1.2	0.6	19.1
4.6			11.2		3.3			

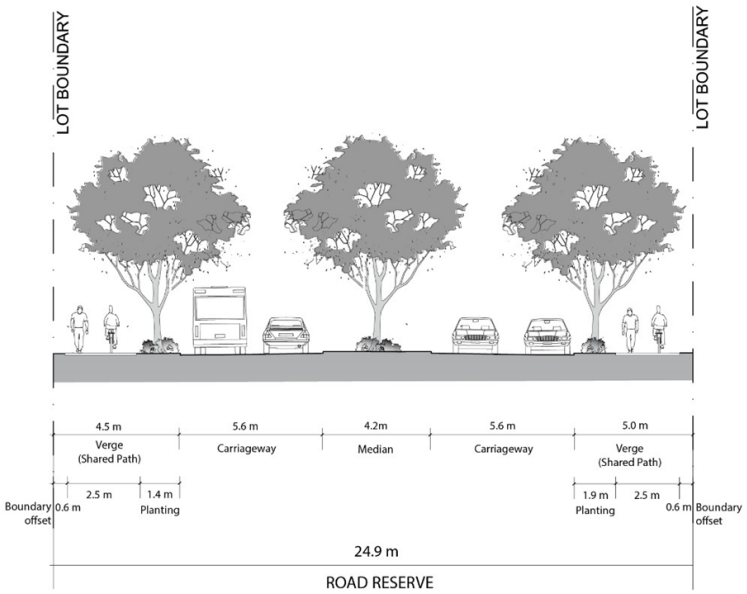

Figure 2.3.3 – 2 Lane Sub-arterial Road

Collector and Local Roads

1. The cross sections of Collector Roads shall be consistent with Figure 2.3.4.
2. The cross sections of Local Roads shall be consistent with Figure 2.3.5.
3. The design provides a reduced carriageway width and an increased area of verge to be incorporated at intersections and regular intervals within the road to perform the following functions:
    - Reduce crossing distances for pedestrians.
    - Define kerb side parking and travel lanes.
    - Assist with traffic calming.
    - Provide increased opportunity for tree planting and canopy cover to support the Greater Sydney Region Plan target of achieving 40% tree canopy cover across Greater Sydney.
4. The carriageway on a Collector Road and Local Road shall be narrowed to a width of 5.5m for a minimum length of 10m and provided every 50m as shown on Figure 2.3.6.
5. At the junctions with other collector or local roads, the carriageway shall be narrowed to a width of 5.5m as shown on Figure 2.3.6.

6. Street trees shall be provided at a rate of one tree for every 10m of site frontage, rounded down to the nearest 10m. Where possible, trees should be of a scale sufficient to produce interlocking canopies, unless specific requirements are provided elsewhere in this DCP.
7. Where the carriageway is narrowed an additional tree shall be provided on each side of the street and located to increase the tree canopy over the street but not too close to the kerb to block the view of pedestrians by drivers.
8. The positioning of bin pads is to assume the mature height and spread of street trees will allow sufficient vertical lift area for collection and not otherwise alienate usable space for tree planting.
9. It is strongly encouraged that street trees planted on the streets running in an East to West direction be native trees and trees planted on streets running from North to South be deciduous.
10. Kerbs shall be vertical and not roll top kerbs. Driveway positions shall be fixed.

Figure 2.3.4 - Collector Road

Figure 2.3.5 - Local Road

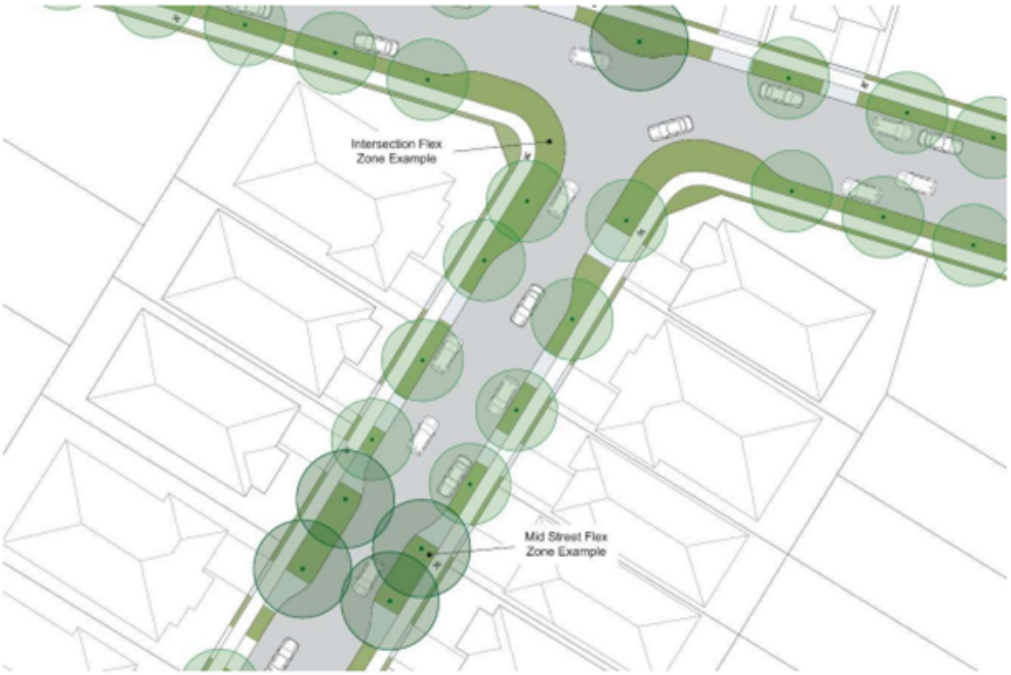

Figure 2.3.6 - Flexizone

2.4 Open Space and Recreation Network

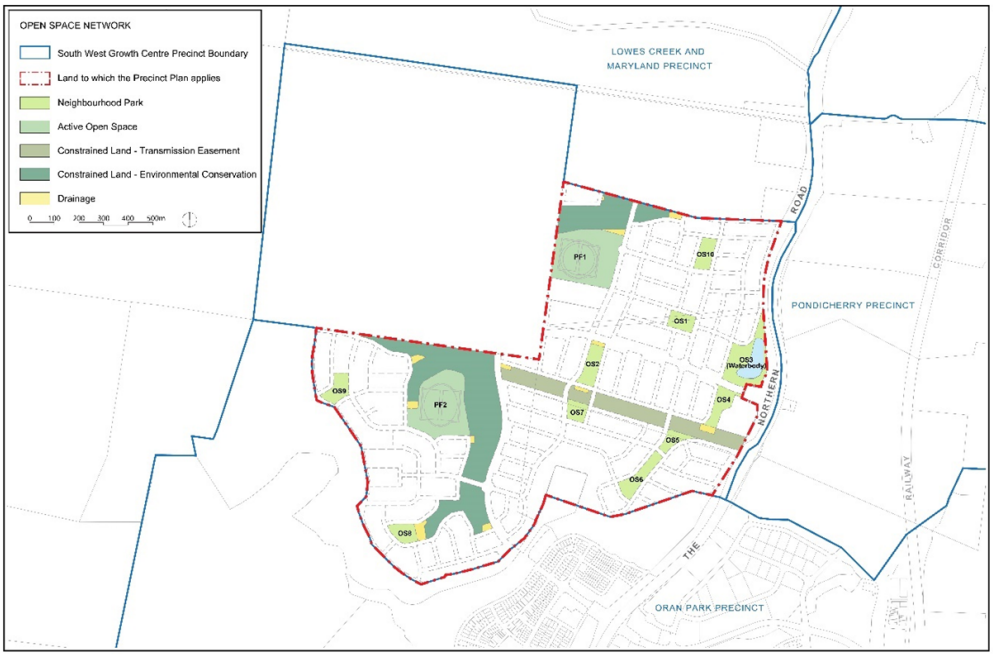

Figure 2.4.1 - Open Space Network

Objectives

a. To provide open space to local residents for social interaction and passive recreation activities.

b. To establish a sense of place and orientation within the neighbourhood by locating open space to take advantage of significant or prominent landscape features, such as views, high points, and areas of natural and cultural heritage significance.

c. To provide for the equitable distribution of public open space and recreation opportunities.

d. To ensure high quality design and embellishment of all public open space.

e. To encourage the dual use of the major creek corridors and drainage land for passive recreation purposes consistent with environmental objectives.

f. To design open space with measures that contribute to a reduction in the number of very strong and extreme heat stress days.

Controls

1. Local sporting fields, neighbourhood parks, recreation activity nodes and other passive open space areas (i.e. environmental conservation, riparian corridors and dual-use drainage) are to be provided generally in accordance with the ILP (see Figure 2.2)
2. The minimum provision of open space facilities is to be consistent with Figure 2.4.2.
3. Neighbourhood parks are to have a minimum area of 5,000 sqm. The following principles are to be taken into consideration in the location of neighbourhood parks:
    - In certain locations, drainage basins as identified in Figure 8, can serve a dual use for both drainage and passive open space.
    - Parks are to be located as focal points within the residential neighbourhoods. All dwellings should be located no further than 500m from a park.
    - Parks shall be located and designed to accommodate remnant vegetation and areas of cultural significance where appropriate and should be linked and integrated with riparian corridors.
4. Promote connection to Country by using Indigenous plant species, interpretive features and retaining artefacts where appropriate.
5. The detailed design of public domain including but not limited to local sporting fields, neighbourhood parks, recreation activity nodes should encourage the following design initiatives and features:
    - A range of play spaces with adequate shading and opportunities to cater for all ages.
    - Provision of adequate parking, lighting and waste management facilities.
    - Inclusion of interpretative signage detailing local history, aboriginal cultural values, environmental education themes and the like.
    - Provision of amenities such as seating with adequate shading, drinking fountains, forms of evaporative cooling, street lighting, street information signs, planter boxes, feature fencing and the like.
6. Where riparian corridors are proposed to be in public ownership, they are to provide opportunities for pedestrian paths and cycleways, fitness trails and additional open space in a manner that maintains the environmental and cultural significance of these areas.
7. A Public Domain and Landscape Plan is to be submitted for each local sporting field, neighbourhood park, recreation activity node and other passive open space areas at the time of subdivision of the adjoining residential area. The selection of landscape species for public open space areas is to consider bushfire risk. The Plan is to provide details on these elements:
    - Earthworks.
    - Street furniture.
    - Plant species and sizes.
    - Play equipment.
    - Utilities and services.

- Public art.
- Hard and soft landscaping treatments.
- Signage and lighting.
- Any entry statements.
- Waste facilities.
- Interpretive material.

8. Minimise paving in open spaces. Where needed, use pavements which are permeable and/or have low heat conductivity, resulting in less solar absorption. When using permeable pavers, it must be demonstrated there is no impact on the salinity or sodicity of underlying soils.
9. Mature trees should be retained and incorporated into the public domain design and retained to contribute to the mature tree canopy cover in the neighbourhood, improve public amenity, improve air quality, and enhance tree canopy cover.
10. Appropriate plant species (including deciduous and native species) are to be selected for the site conditions with consideration given to trees providing shade in summer and allowing sunlight in winter and to provide habitat.
11. Lighting for streets, parks and any other public domain spaces should use energy efficient LED lighting.

2.5 Indigenous Heritage and Connection with Country

Figure 2.5.1 – Indigenous cultural heritage

Background

Engaging with Aboriginal culture and heritage is more than physical objects and places of significance and require a better understanding of and connection to Country, including narratives and the relationship between places.

Country, for First Peoples, relates not only to the cultural group and land to which they belong, it is also their place of origin in cultural, spiritual and literal terms. Country includes not only the land but also waters and skies, the journeys between them and incorporates the tangible and intangible, knowledges and cultural practices, identity and reciprocal relationships, belonging and wellbeing. Aboriginal heritage consists of objects and places that are of significance to Aboriginal people because of their traditions, observances, law, customs, beliefs and history. It may comprise of physical or non-physical elements.

The land sits within a broader cultural landscape that contains Aboriginal artefacts and cultural sites such as former gathering places, ceremonial sites on hills, scar trees and previous living places. Some uses were displaced by post-1788 settlement, but in many locations, colonial uses continued the previous purpose of sites, such as former hunting grounds used for cropping or traditional travel routes overlain by colonial roads.

Retention of vegetated hilltops help ensure preservation and celebration of these features. Linear parks that head away from the ridgelines down creek lines to larger water networks help ensure vistas back to Country, creeks. Limiting development encroachment along creek lines and

waterways helps ensure these places and movement corridors are protected and enhanced. Sympathetic built form through podium setbacks and lower building heights away from ridgelines promote vistas back to sky and Country. Preservation of remnant vegetation clusters to ensure caring for Country principles are implemented.

2.5.1 Indigenous Heritage

Objectives

a. To facilitate the conservation of Indigenous heritage items and areas of cultural heritage significance.

b. To protect areas of high cultural value and ensure development is designed to care for and connect to Country.

Controls

1. If Aboriginal objects might be impacted, an Aboriginal Cultural Heritage Assessment (ACHA) must be undertaken to assess the potential impacts to the Aboriginal Cultural values, provide more detailed management and mitigation measures and support the application for an AHIP where impacts to Aboriginal sites cannot be avoided.
2. Open space and recreation use including passive open space, environmental conservation and riparian corridors should aim to conserve areas of medium and high Aboriginal significance.

2.5.2 Connection with Country

Application

This applies to development applications for:

- Residential flat buildings.
- Commercial development in the B2 Zone.
- Proposed open space and riparian areas.
- Any application for development that proposes to vary a development standard or the ILP.

Objectives

a. Embed Aboriginal cultural and heritage values and connections to country in place making, buildings, landscape and environmental features in land development.

b. Acknowledge and activate Aboriginal culture and heritage through art, architecture, landscaping and other creative expression.

c. Generate a sense of belonging and identity for Aboriginal peoples and culture.

d. Achieve a realisation of stories in the landscape, and opportunities for learning from the landscape and for cultural story telling.

e. Involve registered Aboriginal parties in the planning and design of development and place making.

Controls

Building Design

The design of building structures in or fronting the public domain and of publicly accessible internal areas of buildings in development such as foyers, plazas, malls and courtyards shall include measures for connecting with country and celebrating Aboriginal culture and heritage where practical and be consistent with outcomes of consultation with a registered Aboriginal party.

Applications for development shall show how consideration has been given to:

1. Visual expressions of culture through public art, graphic design, materiality and the like in prominent spaces.
2. Indigenous materials, colour and tones in building elements and materials - timbers, masonry and metal elements.
3. Resilient materials that adapt to climate extremes, uses and occupation.

Interpretive Elements, Public Art and Place Naming

The design of landscape and structures in the public domain and of publicly accessible outdoor areas in development (such as main access paths, plazas, malls and courtyards) shall consider provision of public art, interpretive measures and place naming promoting connections with country and celebrating Aboriginal culture and heritage, where practical, and be consistent with outcomes of consultation with a registered Aboriginal party.

Applications for development shall show how consideration has been given to:

1. Provision of identifiably local Aboriginal visual expressions of culture through public art, graphic design, materiality, place naming and the like, in prominent spaces.
2. Interpretive education about Aboriginal culture and heritage into signage, wayfinding material, historic plaques and markers.
3. Provision of public art prepared by local Aboriginal artists in a manner that integrates local stories connecting with country and Aboriginal culture in public open space.
4. Aboriginal names and language in naming of streets, parks, promenades, plazas, signage and wayfinding elements.

Landscape and Public Domain

Landscape design in areas of the public domain, open spaces and curtilage spaces around buildings provide opportunities for connecting with country and celebrating Aboriginal culture and heritage, where practical, and be consistent with outcomes of consultation with a registered Aboriginal party.

Applications for development shall show how consideration has been given to:

1. Retention of significant elements in the landscape including any monumental land formations and curvilinear landforms reflecting the geological landscape, hill tops & ridge lines, rock outcrops, natural water bodies, indigenous vegetation, scarred trees, significant view / sight lines.
2. Spaces of movement and spaces of pause through the landscape.
3. Accessible, safe and sensory spaces in public open space designed for telling and sharing stories of country and teachings of Aboriginal culture and history.
4. Integration of distraction methods for spaces that need to be avoided or kept private or hidden.
5. Landscape planting using species that are endemic and need relatively low water supply.
6. Surfaces that allow water to permeate the ground.
7. Water bodies in the environment, and reuse / recycling of water for irrigation of vegetation.
8. Visual expressions of culture and heritage through public art, graphic design, interpretive measures, and materiality in buildings in prominent spaces in the public domain.

Consultation with Registered Aboriginal Parties

Development applications to which this section applies shall include a written report or statement describing the following:

1. Consultation carried out with one or more registered Aboriginal parties on the development of the site or the development of the precinct or locality in which the site is located;
2. The outcomes of the consultation, including the story of country and identification of any Aboriginal cultural and heritage values on the site and suggested practical measures to connect with country and to celebrate Aboriginal culture and heritage.
3. The practical measures by which the outcomes of the consultation have been addressed in the planning and design of development and place making including in site analysis, site planning, and design of landscape and building structures.

2.6 European Heritage

Objective

a. To ensure that development will not result in visual impacts to the Denbigh Estate and heritage homestead.

Control

1. Built form and landscaping is to ensure roof tops of residences are not prominent when viewed from Denbigh Estate to the south.

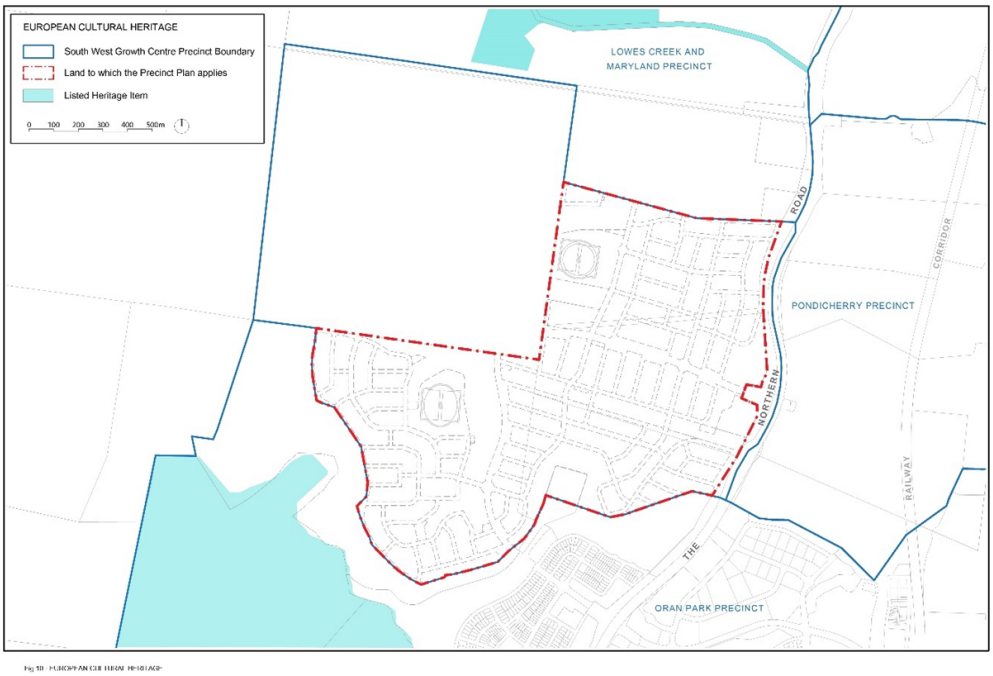

Figure 2.6.1 – European cultural heritage sites

2.7 Noise

Objective

a. To ensure appropriate levels of noise do not impact quality of life for future residents.

Controls

1. Residential development shall be designed to comply with Council's Environmental Noise Policy (2018) that incorporates DECC's Environmental Criteria for Road Traffic Noise.
2. Residential properties fronting The Northern Road and sub-arterials within the Precinct are to be designed to incorporate mitigation strategies for reducing road traffic noise impacts. These include:
   - Acoustically optimising the site layout.
   - Designing building layouts to place less noise sensitive uses near to the source of the noise.
   - Implementation of acoustically treated fencing.
   - Inclusion of architecturally designed noise control elements within areas close to The Northern Road in order to ensure that target noise levels are achieved within internal spaces throughout the development.
3. Where noise impacts remain after the use of the above measures, the residential impacts should be managed by construction techniques and façade treatments (e.g. double-glazing windows, increased wall thickness, winter gardens and mechanical ventilation).

2.8 Odour

Background

Many parts of the South West Growth Area (SWGA) are currently rural/rural residential in nature and contain a variety of odour producing poultry farms, piggeries and horticulture as noted in Figure 2.8.1.

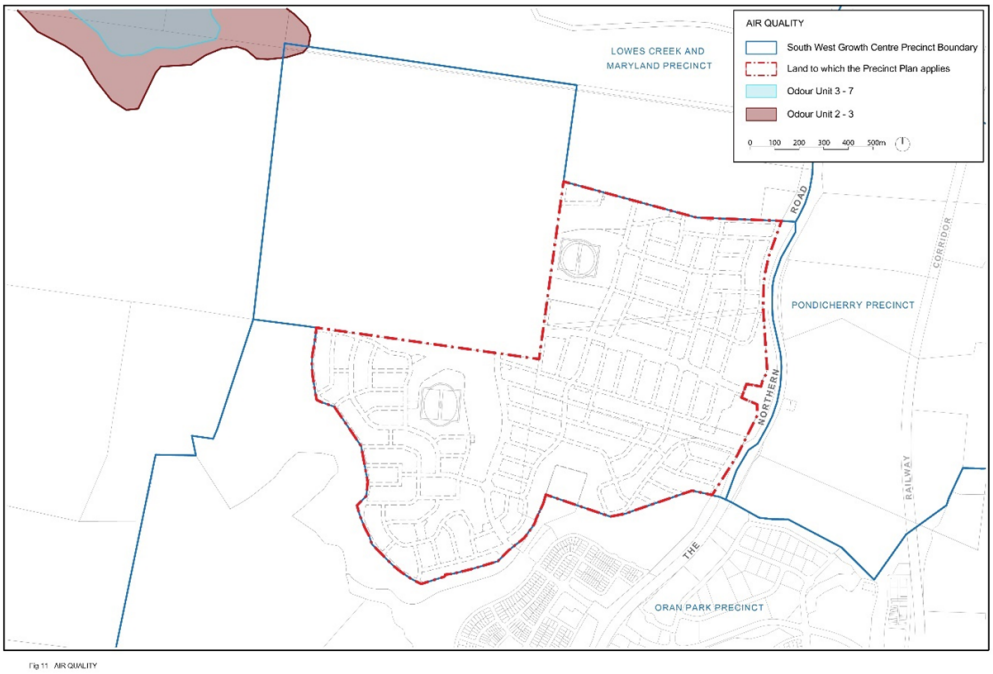

Figure 2.8.1 – Odour

Objectives

a. To ensure odour amenity is acceptable for future residents, sensitive receivers and commercial / industrial land uses.

b. To facilitate the rural to urban transition of the SWGA.

Controls

1. The odour amenity criteria adopted for the SWGA is:
   - Residential / sensitive land uses – maximum of 4.5 odour units (OUs) for no more than 250 hours per year.
   - Commercial / industrial land uses – maximum of 7.5OU for no more than 250 hours a year.
2. Any development application involving properties located within the SWGA, which are anticipated to potentially be impacted by more than 4.5OU (for residential/sensitive land uses) or 7.5OU (commercial/industrial) for more than 250 hours a year must be accompanied by an Odour Report. The report must be prepared in accordance with the

Technical Framework and Notes – Assessment and Management of Odour from Stationary Sources in NSW (November 2006) by the then Department of Environment and Conservation NSW (the NSW Environment Protection Authority). The report is to include, where necessary, either a level 2 (worst case data adopted) or level 3 (site specific data) assessment with dispersion modelling being required for both options.

3. Consultation with Council is recommended prior to the preparation of development applications and odour reports identified in Control 2.

2.9 Salinity and Contamination

Objectives

a. To ensure development is located away from low lying areas such as creeks and dams where salinity is concentrated.

b. To manage salinity as development progresses.

Controls

Salinity

1. Additional investigation should be undertaken in development areas which are to be excavated deeper than 3m or into rock at shallower depth, where direct sampling and testing of salinity has not been carried out.
2. Salinity management strategies may need to be modified following additional investigation by deep test pitting and/or drilling, sampling and testing for soil and water pH, electrical conductivity, total dissolved solid, sodicity, sulphates and chlorides.

Contamination

3. Additional assessment of identified Areas of Environmental Concern (AEC) is required to identify whether material is suitable to be retained or disposed of in accordance with its relevant waste classification.
4. The site-specific investigations required to confirm the presence and remediation strategy for contamination are set out below:

    - Further intrusive investigation works in the form of a Detailed Site Investigation in accordance with SEPP (Resilience and Hazards) 2021 and NSW Environment Protection Authority Guidelines will be necessary prior to DA stages.
    - Targeted sampling and/or a site walkover (for the separate ownership lots) is required in each of the 23 AECs together with a lower density sampling regime in the remainder of the site area. Further assessment of the AEC areas will determine appropriate remediation requirements, if any, to render the site suitable for the proposed development. These further investigations will be required prior to DA stages.
    - Based on observations made during the site walkover, there is the potential for Asbestos Containing Material (ACM) to be present in current structures in several areas at the site. It is therefore recommended that a hazardous building materials survey is completed prior to any demolition of structures.
    - There is the potential that hidden, below ground structures (such as underground storage tanks, septic tanks, ACM pipes and ACM fence footings) may be present at the site and this should be considered accordingly during the Detailed Site Investigation and subsequently during bulk earthworks for the proposed development. It is recommended that the proposed Detailed Site Investigation should include an inspection of soils around the perimeter of the current building footprints to identify any buried ACM pipes.
    - An Unexpected Finds Protocol will need to be established for use during earthworks in order to ensure that due process is carried out in the event of a possible contaminated find.

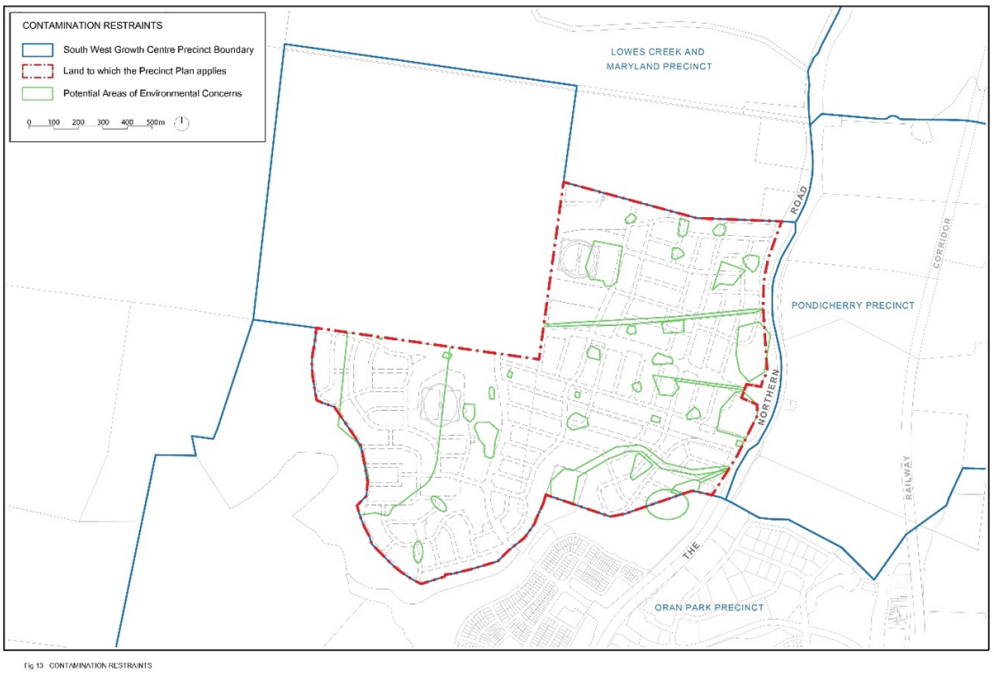

Figure 2.9.1 - Contamination

2.10 Biodiversity and Riparian

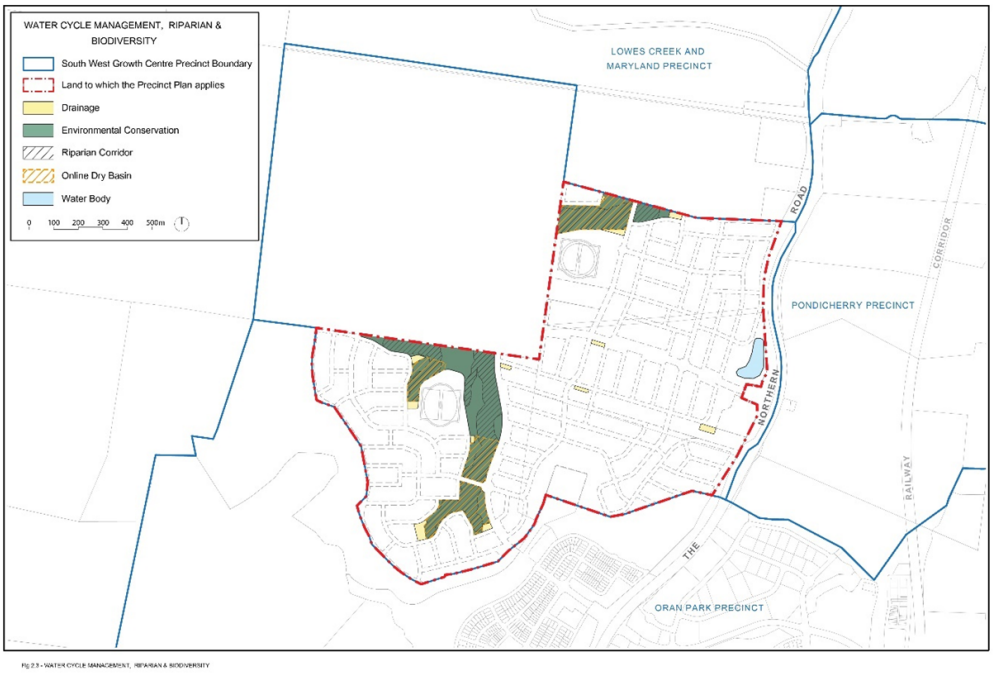

Figure 2.10.1 - Biodiversity Constraints

Objectives

a. To protect waterways from degradation and improve their environmental function to mimic natural systems.

b. Improve public access and use of riparian corridors, providing connected and public green space.

c. To conserve, protect and enhance native riparian vegetation and associated habitat.

d. To restore and rehabilitate degraded riparian land and allow development which is compatible with the conservation values of these areas.

e. To protect and improve water quality.

f. To maintain and enhance bed and bank stability.

Controls

1. A Vegetation Management Plan is required to be prepared and implemented in accordance with Natural Resources Access Regulator (NRAR) Guidelines for Vegetation Management Plans, which would incorporate details for the rehabilitation of riparian areas adjacent to land to be developed (refer to Figure 2.10.1).
2. All vegetation within the riparian corridor that will not be affected by drainage infrastructure will be protected by way of land zoning and placed in public ownership.

2.11 Bushfire

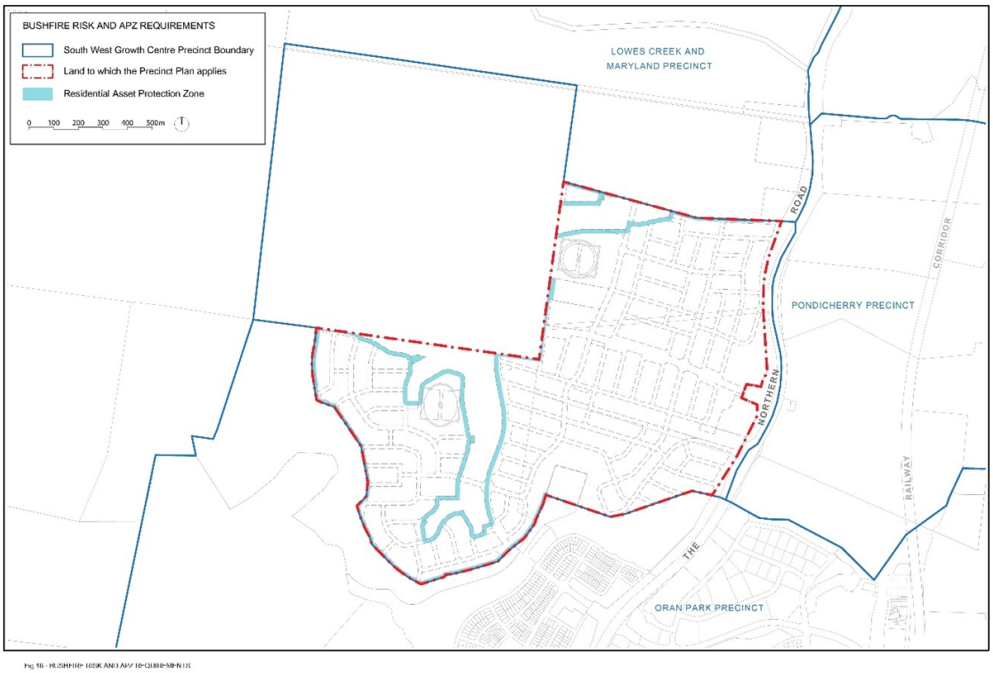

Figure 2.11.1 – Bushfire risk and APZ requirements

Objective

a. To mitigate and manage bushfire hazard risk within the Precinct and on adjacent lands.

Controls

1. All development adjoining bushfire prone vegetation with asset protection zones (APZs) must include adequate setbacks (refer to Figure 2.11.1).
2. The design specifications set out in the New South Wales Rural Fire Service's Planning for Bushfire Protection (2019) are to be applied to future development, including the construction of access roads, the provision of water, electricity, and gas services, and special fire protection purpose development.
3. Any amendments to the ILP should ensure that access points are still available at the following locations to ensure safe evacuation routes:
    - North into the Lowes Creek Maryland Precinct and the future road along the northern boundary of the subject site east towards The Northern Road.
    - East onto The Northern Road.
    - South-east onto the Northern Road via a new road through 'Oxley Ridge'.

2.12 Urban Heat Management

Background

Western Sydney is experiencing increasing temperatures and increasing durations of periods of heat. The urban areas of Western Sydney are experiencing even greater temperature increases due to the *Urban Heat Island Effect*. This effect occurs when the vegetated landscape, including water features or damp areas are replaced with hard and dark surfaces such as buildings and pavements, which absorb and radiate heat. This effect is particularly noticeable where there is no shade and only hard surfaces. Conversely winter night time temperatures are not so cold where there is substantial tree cover.

As more urban development takes place in the Camden LGA, the impact of heat in urban areas will increase if it is not addressed.

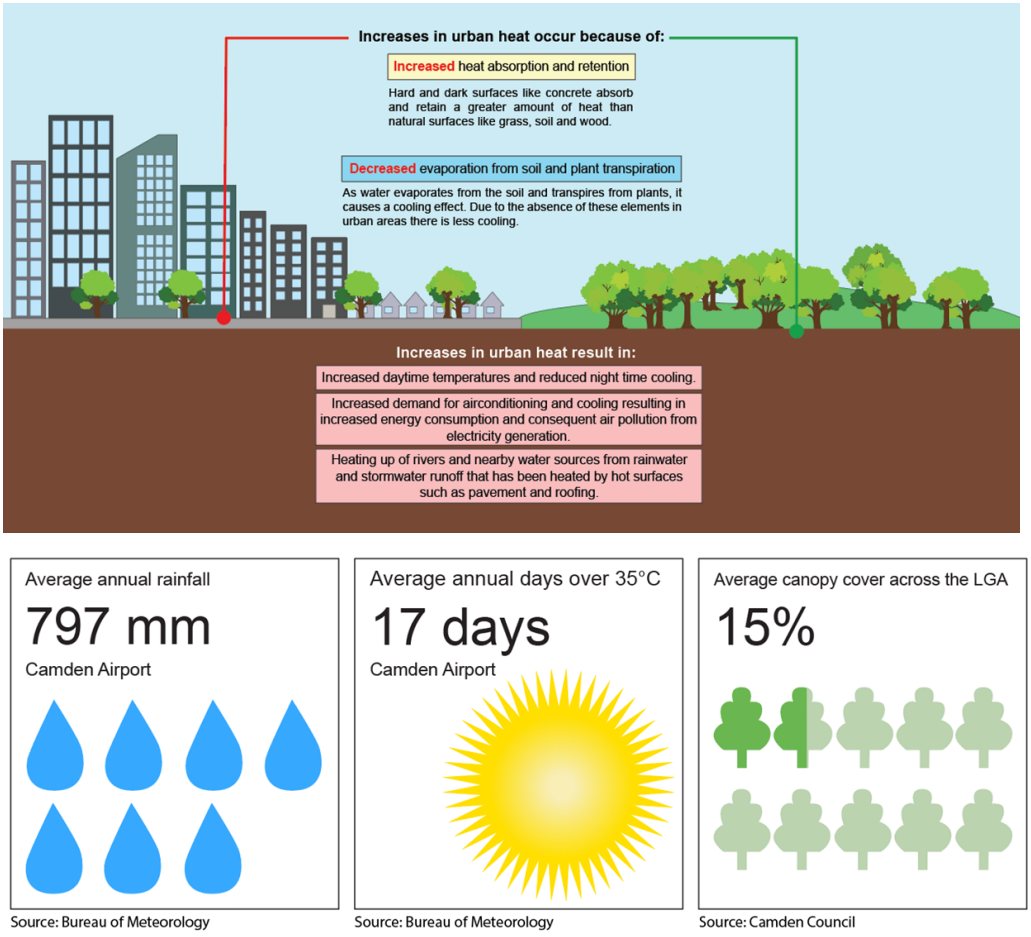

Figure 2.12.1 Context of the environment of the Western Parkland City

Objectives

a. To ensure development incorporates effective planning and design measures to reduce the urban heat island effect.

b. To ensure buildings and outdoor spaces are thermally comfortable, particularly during summer, for people living and working.

c. To promote green infrastructure and water in the landscape for their cooling benefits.

Controls

Landscape Design

1. The proposed development must demonstrate that the following design elements are incorporated:

   - Trees are provided with adequate space above and below ground and are supported by passive irrigation.
   - Internal and external passive solar access is managed through tree and vegetation selection and location.
   - Shading is provided to exposed western façades.
   - Where feasible, there is shading to car parking spaces and paved surfaces.
   - Vegetation is co-located with existing trees, and/or clustered to improve its cooling effect, where this is not in conflict with other controls such as Planning for Bushfire Protection.
   - Plantings include drought tolerant and heat resilient varieties and contribute to canopy coverage.
   - Where feasible, permeable materials such as dry laid paving, permeable pavers, unbound aggregate or bound paving are utilised and are appropriate for site conditions.

   Note:

   - Landscape plans are not required for minor alterations to an existing dwelling.
   - Landscaping requirements for Urban Heat Management are in addition to landscaping requirements elsewhere in the DCP.
   - Refer to **Building materials** for design solutions that involve shade structures over car spaces.

2. Developments shall be designed to ensure that existing mature trees, including street trees, can be retained.
3. Applications shall demonstrate that adequate solar access has been provided to the dwelling and to any proposed or future solar panels.
4. Tree species selection and location must demonstrate consideration of the Landscape Design and Vegetation Management sections of this DCP, as well as the following:

   - Shading effect, including location and maximisation of possible canopy size and density.
   - Heat and extreme heat resilience.

- The character and constraints of the locality.
- Planting density.
- Nearby public utilities, infrastructure, public authority requirements, easements, and hardstand areas.
- The availability of tree stock and species that are locally endemic and appropriate to the site.
- Adequacy of tree planting pits, tree pot sizes and mature growth sizes are appropriate for the site and ensure longevity.
- The site conditions, including soil type and salinity.
- National Building Specification (NATSPEC) "Specifying Trees – a Guide to Assessment of Tree Quality' (Clark, R. 2003).
- Australian Standard AS2303.
- Council's Tree Management Policy P1.0012.2.
- Any disruption of solar access for solar panels on existing or adjoining present and future development should be minimised.
- Any services or utilities infrastructure within the road reserve, such as power poles, overhead wires, drainage inlet pits, existing street trees and any existing driveways.

Tree Planting Specifications

5. Tree Planting location and numbers shall be provided in accordance with development type as detailed in Table 5:

Table 5 - Minimum tree canopy cover by development type

Development type	Tree canopy and planting
Dwelling houses **Secondary Dwellings** **Dual occupancies** **Attached dwellings** **Semi-detached dwellings**	**Front Setback** • At least 1 small tree located to provide summer shade to the dwelling or hard surfaces. **Side Setback** • Where a setback is 2m or greater, planting alongside boundaries is to provide small - to - medium trees for sun-shading. **Rear Setback** • Small and medium trees are to be provided in accordance with the relevant lot size below. Trees are to be situated to provide an interlocking canopy. Small and medium trees and shrubs should be predominantly indigenous to the Camden LGA. • Trees required per lot size: - 1 tree under 450m^2 - 2 trees under 600m^2 - 3 trees 600m^2 and above

Table 5 - Minimum tree canopy cover by development type	
Development type	**Tree canopy and planting**
Multi Dwelling Housing	**Front Setback (including the side setback on a street corner)** • At least 1 tree per 10m of frontage located to provide summer shade to the front dwelling/s or hard surfaces. **Car Parking Spaces** • Open car parking spaces shall be lined by an "avenue" of shady trees. **Alternatively** • At least 30% of the development site is to provide tree canopy. **Tree canopy is to be defined by Sustainability** • A canopy tree is a tree that produces a layer of leaves, branches, and stems that cover the ground when viewed from above while allowing movement of pedestrians and vehicles underneath. Typically, a canopy tree has a mature height greater than 6m with a spread of at least 4m. Tree canopy shade reduces ambient temperatures mitigating the effects of the heat island effect while creating liveable environments with a range of other environment benefits.
Boarding Houses **Co-Living Housing** **Manor Houses** **Group Homes**	**Front setback** (including the side setback on a street corner) • At least 1 small tree per 10m of street frontage located to provide summer shade to the building or hard surfaces. **Rear setback** • At least 3 trees are to contribute to an interlocking canopy of low to medium-height trees and shrubs. **Side setback** • At least 1 small-to-medium height canopy tree per building for sun-shading. **Corner parking spaces** • Open car parking spaces that shall be lined by an "avenue" of shady trees.
Residential Flat Buildings	**Front setback** (including the side setback on a street corner) • At least 3 small to medium trees located to provide summer shade to dwellings or hard surfaces. • Along driveway verges and surrounding parking basements • Screen plantings of small to medium trees. **Side setback** • Planting alongside boundaries is to provide small to medium trees for sun-shading. **Rear setback** • At least 3 trees are required to contribute to an interlocking canopy of low to medium-height trees and shrubs.

Table 5 - Minimum tree canopy cover by development type	
Development type	**Tree canopy and planting**
Open car parks on private land	• A minimum of 40% tree canopy cover must be provided over the total combined area of all car parking spaces, where car parking is to be provided on the development site. • Canopy cover is to be calculated by finding the percentage of the specified area covered by the anticipated canopy at 2/3 of the selected species total maximum width, when fully grown. Figure 2.12.1 provides an example of how canopy cover should be calculated. • Trees should be provided across the car park area and can be located within landscaped setbacks and deep soil zones. • Where tree roots are expected to grow beneath car parking spaces, engineered tree pits or vaults and aeration infrastructure must be provided and designed in accordance with design guidance provided in engineering design guidelines and the Urban Forest Strategy 2023. • Wherever possible, canopy trees shall be orientated to the north, east or west of parking spaces to maximize shade during the day. • Trees and woody plants above 200mm high should be planted a minimum of 600mm back from the wheel stop, measured from their trunks. Low planting should be provided in this space.
Industrial **Business Commercial and Tourism development** (where landscaped setbacks are required)	• Landscaping within setback areas must include 1 large tree per 18.5m^2 and provide sufficient soil area in accordance with Table 6. • Canopy from large trees should be supported with medium and small trees and vegetation to provide a collective cooling effect, where they will not obstruct views, signage, or impact safety.

Soil Volumes

6. Minimum soil volume and planting area to be provided is to be based on minimum tree sizes, in accordance with Table 6:

Table 6 - Tree size and planting site area			
Maximum tree size at maturity	**Planting site area required**	**Planting site depth required**	**Soil Volume per tree**
Small (less than 8m tall or under 4m wide)	Less than 9.5m^2	1.0 to 1.3m	30m^3
Medium (9-12m tall or under 4-8m wide)	9.5m2 to 18.5m^2	1.3m to 2.5m	35m^3
Large (Taller than 13m or wider than 8m)	More than 18.5m^2	>2.5m	80m^3

7. The location of all trees, including street trees, shall consider:
    - Integration with development design to produce improved cooling effects through measures such as maximisation of shade provided to exposed building walls, hard surfaces, and pedestrian walkways.
    - Any disruption of solar access for solar panels on existing or adjoining present and future development should be minimised.
    - Whether there is appropriate soil area for root volume.
    - Any services or utilities infrastructure within the road reserve, such as power poles, overhead wires, drainage inlet pits, existing street trees and any existing driveways.
    - Requirements in the Urban Forest Strategy 2023.

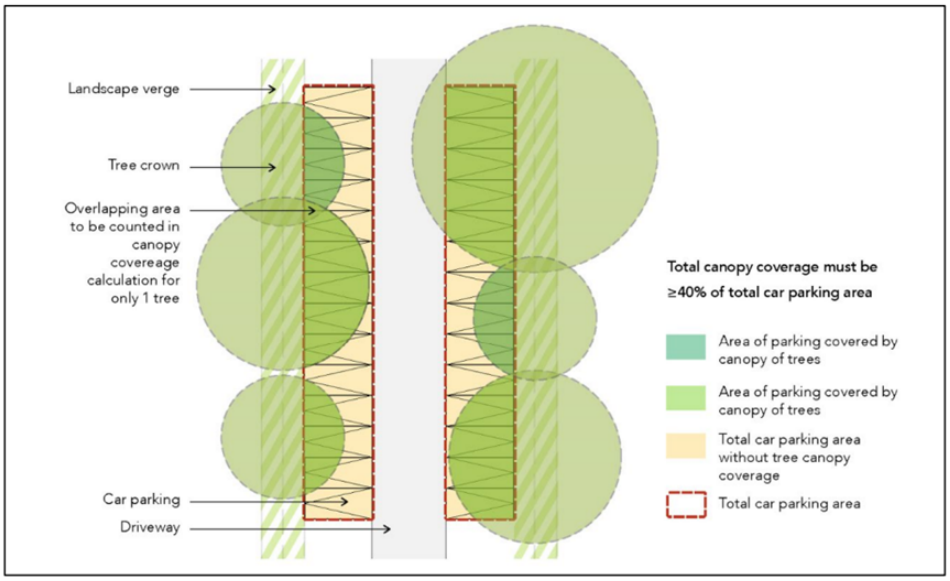

Figure 2.12.2 - Canopy cover to be achieved over car parking spaces

Irrigation

8. Unless other requirements are specified by the SEPP (Sustainable Buildings) 2022, all commercial and industrial development shall provide drip irrigation or passive irrigation to private vegetated landscaped areas, that is designed to be gravity fed. This control also applies to residential flat buildings, or any form of residential development with shared outdoor areas and works within the public domain.

Building materials

9. Minimise impervious surfaces by including, but not limited, to the following:
    - Porous pavement materials where possible, particularly for car parking spaces.
    - Vegetated green roofs on buildings.
10. Minimise the area of driveways, car parking spaces and other pavements to the minimum requirement under the DCP.

11. Provide storage for stormwater to minimise runoff and the option for distribution to porous surfaces.
12. Open car parking areas, whether at ground level or at the top level of a multi-storey car parking area, may, in lieu of landscaping, either in part or full, provide shelter structures over the car parking spaces where it is shown that it will have a greater impact on reducing the impact of reflected heat from the pavement, and where the appearance of the shelters is acceptable to Council.
13. Identify how the design of the development has minimised impermeable surfaces.

Cooler colours

14. All buildings and ancillary development shall meet the following requirements for cool roofs:
    - Achieve a minimum Solar Reflectance Index (SRI) (with a minimum 3-year manufacturer guarantee) of:
      - 64 for roof pitches less than 15^0.
      - 34 for roof pitches greater than 15^0.
      - 28 for rooftop terraces.
    - At least 75% of the roof area shall meet SRI values and/or be designed as a vegetated green roof. Roof areas where solar panels (PV) are mounted flat on a roof are excluded, all other roof areas without PV count toward the Cool Roof area calculation.
    - Roofs that are 'downslope' from publicly accessible places, such as in hilly areas, scenic areas or which are in view from taller adjacent buildings should avoid reflective white or very light-coloured finishes that could cause glare.
    - Surfaces such as concrete must be avoided as a roofing material unless shade or other coverage is provided or where roofs are light in colour.
    - Walls, car parking spaces, driveways and landscaping materials should achieve a high SRI (be as light as possible).

      Note: An SRI of 0.4 is suitable for car parking, pavements and walls.
15. Medium colours and materials with high thermal emittance (which release heat quickly) and/or permeable materials should be used in pedestrian areas where no shade is provided to minimise heat reflection and to mitigate heat retention.

    Note: A materials and finishes schedule shall be submitted, and must include:

    - Product specifications where certain materials are relied upon to address the criteria of BASIX, Section J of the National Construction Code (NCC) or this DCP.
    - Product specifications should include energy efficiency properties, such as:
      - Thermal mass.
      - Effect on air flow.
      - Appropriate colour and reflectivity.
      - Material permeability in landscape design.

Cooler through building design

16. Building design must include the following passive design elements:
    - Cross ventilation taking advantage of north easterly breezes.
    - Maximise solar access.
    - Consideration of orientation in development design.
    - Shading devices and window glazing.
    - Zoned and flexible spaces to achieve thermal comfort.
    - Reduce overheating in summer and promote solar gain in winter.
17. Building design must consider orientation to maximise the northerly aspect and solar access in the cooler periods. Where the site permits, designs should deliver long, thin buildings with increased northern and southern exposure and limited exposure on eastern and western-facing facades and moderate depths.
18. One and two storey buildings shall provide eaves with a minimum of 450mm overhang (measured to the facia board) on western-facing elevations, except where walls are permitted to be built to the boundary.
19. Alternative solutions to eaves may be considered, where it can be demonstrated that these provide appropriate sun shading and are integrated with the design of the development and have architectural merit.
20. Where concrete walls are exposed for industrial, business, and commercial development at least 50% of western elevations must be shaded using design features or vegetation. Where there is a zero-lot setback, this control does not apply.
21. Ensure roof design maximises opportunities for future installation of solar power and hot water adaptation through the consideration of:
    - North-facing surface.
    - Overshadowing.
    - Structural support.

Part 3 – Centres Development Controls

3.1 Precinct 5 (Part) Neighbourhood Centre

This section applies to the area containing the neighbourhood centre, the primary school and playing fields in Sub-Precinct 5, as shown within Figure 3.1.1.

These controls are in addition to the Section 5.0 Centres Development Controls in the DCP.

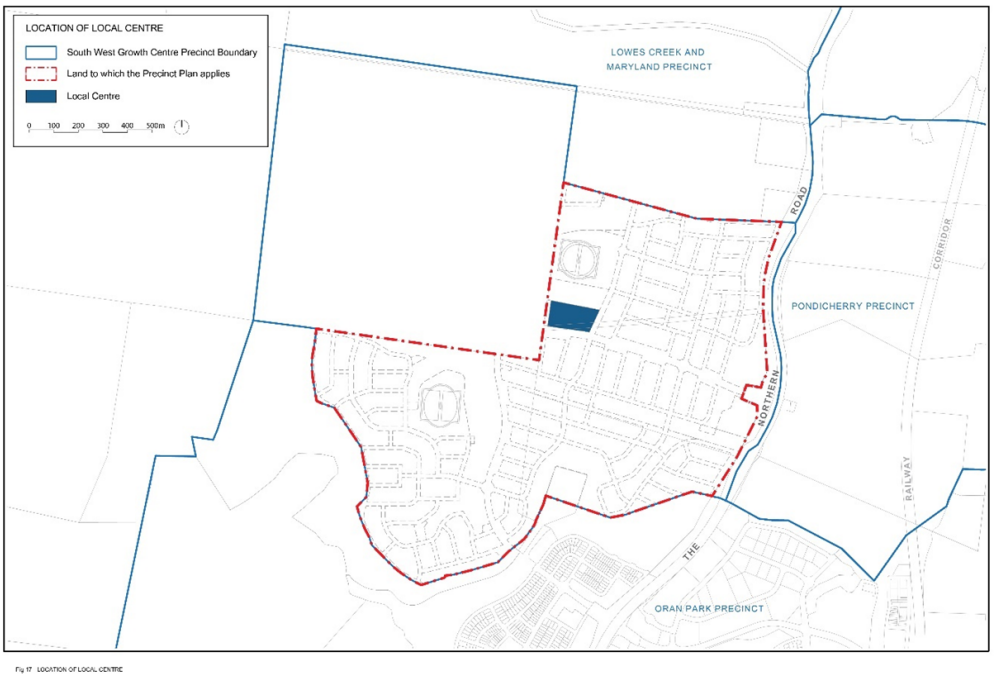

Figure 3.1.1 – Location of Neighbourhood Centre

3.1.1 Indicative Layout Plan

Objectives

a. To encourage a vibrant, well-designed, and active mixed use neighbourhood centre with a sense of community.

b. To provide the opportunity to accommodate the co-location of neighbourhood commercial uses, a primary school and playing fields.

c. To ensure developments are welcoming and safe for pedestrians and contribute to the safety of the public domain.

d. To ensure buildings are of an appropriate scale and bulk and provide passive surveillance to the public domain.

e. To facilitate housing diversity by encouraging shop-top housing.

f. To establish a safe vehicle, pedestrian and cycle network that minimises potential for traffic conflict.

Controls

1. Development of the neighbourhood centre, school and playing fields is to be consistent with the Indicative Layout Plan as shown in Figure 3.1.2 and Urban Design Principles Plan in Figure 3.1.3.
2. Cycle lanes are to be defined using coloured asphalt.
3. The traffic speed limit along this strip is to be 40 km/h or less.
4. Along this paved strip, there is also no access to the collector road from the residential flat buildings.

Figure 3.1.2 - Indicative Layout Plan for neighbourhood centre, school and playing fields

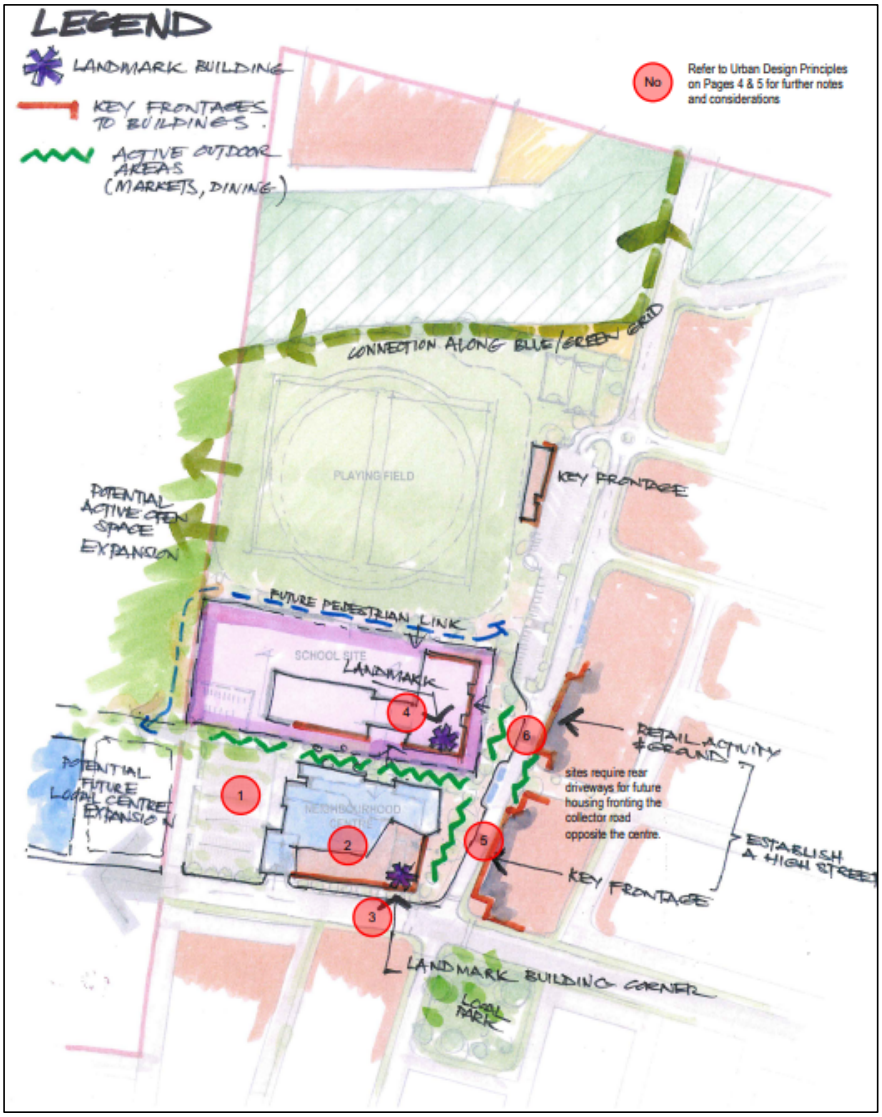

Figure 3.1.3 - Urban Design Principles plan for neighbourhood centre

3.1.2 Built form

Objectives

a. To ensure built form outcomes contribute positively to the public domain and contain high quality urban design outcomes.

b. To achieve built form that responds to the human scale, does not negatively impact solar access, and provides passive surveillance of surrounding public domain.

c. To ensure buildings have adequate setbacks to provide for public plaza space and pedestrian circulation areas.

d. To ensure building setbacks are adequate enough to achieve visual and acoustic privacy between the centre and the school.

e. To activate public spaces and provide passive surveillance through the use of active frontages along the ground level of the podium.

f. To ensure buildings have effective façade articulation to provide design character and visual interest.

g. To encourage a corner development that defines the street corner and supports the adjacent public plaza.

Controls

1. The residential component of shop-top housing must be setback from the primary street frontage and buffered through the provision of a balcony or similar.

2. All ground floor tenancies directly accessible from the public domain must be retail tenancies, unless it can be demonstrated that the active frontage is maintained.

Commercial podium

3. The ground level is to be setback a minimum of 20m from the collector road to the east and school to the north. This is to accommodate a public plaza space that will be designed in accordance with Section 3.1.3.

Figure 3.1.4 - Public plaza precedent

4. The tenancies along the plaza must present an active frontage by providing the following:

- Display windows or entrances that cover at least 80% of the width of the premises frontage.
- Clear glazing along the frontage with security grilles that are visually permeable or transparent. Grilles are encouraged to be mounted internally.
- Façade design that incorporates lighting that contributes to safety at nighttime.
- Scale of the frontage should be appropriate to the street and the human scale.

5. The ground level is to be set back 3m from the sub-arterial road and have an articulated façade using various building materials and finishes. There must be sufficient glazing to facilitate passive surveillance of the road.
6. The western side of the commercial podium must provide welcoming and safe access to the neighbourhood centre building from the car park. Figure 3.1.5 contains precedent images to inspire the design.

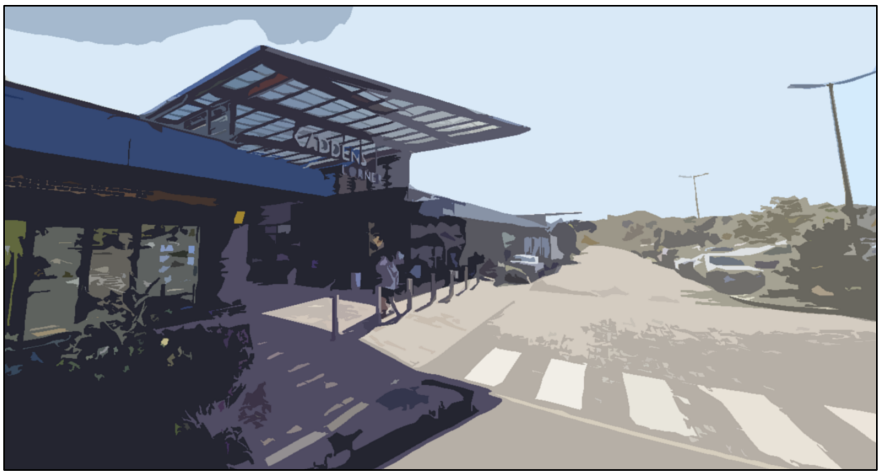

Figure 3.1.5 – Entrance from shopping centre car park

7. Continuous weather protection must be provided on all frontages of the commercial podium.
8. The south-east corner of the centre is to be a feature of the neighbourhood centre, which will act as a landmark corner that defines the street and adjacent public plaza.

Residential buildings

9. Residential buildings above commercial podium are to be sited and have their massing predominantly on the southern side of the centre away from the school to the north.
10. Residential buildings are to have the following minimum setbacks from the outer wall of the commercial podium building below:
    - A minimum 4m setback from the outer commercial podium wall on the western, southern and eastern sides.
    - A minimum 10m setback from the outer commercial podium wall on the northern side to achieve a minimum 30m separation from the school boundary.

11. Residential buildings are to be designed to avoid and minimise overlooking of active outdoor areas in the school to the north.
12. Residential building elevations are to have a high level of modulation and articulation with a mix of solid walls, openings and use of different materials and finishes. No blank monotonous wall is to exceed a dimension of 15m without substantial articulation.

3.1.3 Public domain, pedestrian amenity, and landscaping

Objectives

a. To ensure the public domain supports a vibrant, safe, and functional neighbourhood centre and provides ample opportunities for community interaction and activities.
b. To utilise soft landscaping to strengthen sustainability and visual outcomes through the use of drought resistant plantings that vary in height, density, colour, and texture.
c. To ensure hard landscaping and paving supports amenity and accentuates the soft landscaped areas.
d. To ensure there is adequate weather protection throughout the public domain.
e. To incorporate elements that mitigate against urban heat.
f. To contribute to effective and safe pedestrian and cyclist circulation.
g. Design includes measures to protect against adverse weather conditions including shading against hot sun, shelter from rain and high wind, and measures to minimise urban heat.
h. To contribute to achieving a safe and accessible pedestrian and cycle network.

Controls

Public Plaza

1. A publicly accessible plaza space is to be provided around the northern and eastern sides of the neighbourhood centre building in the setback areas from the adjacent school and collector road. The plaza space is to be activated and have a high level of amenity and pedestrian comfort with the following:
    - Active speciality commercial and retail shopfronts at the building perimeter edge of the plaza.
    - Good solar access with at least 4 hours of direct sunlight to 75% of the plaza between 8am and 4pm on the winter solstice.
    - Weather protection with awning or colonnade having a minimum depth of 3m around its building perimeter side.
    - Landscaping with a mix of paving and different types of vegetation, furniture including seating and tables, public art, and lighting.

Landscape Planting

2. Landscape planting of trees, shrubs and groundcovers is to be provided through the neighbourhood centre including the following:
    - Small trees, shrubs and ground cover in parts of the public plaza space.

- Street trees with grass ground cover on road verges between carriageway and pedestrian footpaths or shared pedestrian and cycle paths.
- Street trees and shrub hedges along road verges between carriageways and footpaths or shared pedestrian and cycle paths where pedestrian road crossing is to be discouraged.
- Small trees and/or shrubs along the pedestrian connections including shared vehicle & pedestrian lanes and shared pedestrian cycle paths.
- Small trees and/or shrubs through and around the perimeter of car parking areas.
- A mix of larger and smaller trees and tall shrubs around the perimeter of the playing fields.

3.1.4 Access and Parking

Objectives

a. To achieve a functional, efficient, convenient and safe access network for vehicles, pedestrians and cyclists.

b. To accomplish a pedestrian and cycle friendly environment with walking and cycle paths that are safe and have good amenity providing connections in all directions around and between the centre, school and playing fields and with the surrounding road network.

c. To minimise potential for traffic conflict between vehicles associated with use of the school and vehicles associated with use of the commercial centre by separating the main vehicle access and parking areas between the uses.

d. To separate and minimise potential for traffic conflict between trucks using the loading dock for the retail centre and other vehicles associated with the commercial centre uses and school use.

Controls

1. Development of the neighbourhood centre, school and playing fields is to be consistent with the hierarchy of roads, shared pedestrian and cycle paths, and pedestrian path connections in the Traffic Circulation and Parking Plan in Figure 3.1.7.

Figure 3.1.6 – Main street environment

2. The location of vehicle parking is to be consistent with the Traffic Circulation and Parking Plan in Figure 3.1.7 below including the nominated locations for the neighbourhood centre retail car park, neighbourhood centre loading dock, school staff car park, and shared car park area for school pick-up/drop-off and playing fields.
3. School pick-up and drop-off parking shall be located in the nominated shared car park in the Traffic Circulation and Parking Plan in Figure 3.1.7.
4. Bus stops are to be located along the collector road on the side of the centre consistent with the locations shown on the access network plan in Figure 3.1.7.
5. Treatment of key intersections is to be consistent with that shown on the Traffic Circulation and Parking Plan in Figure 3.1.7.

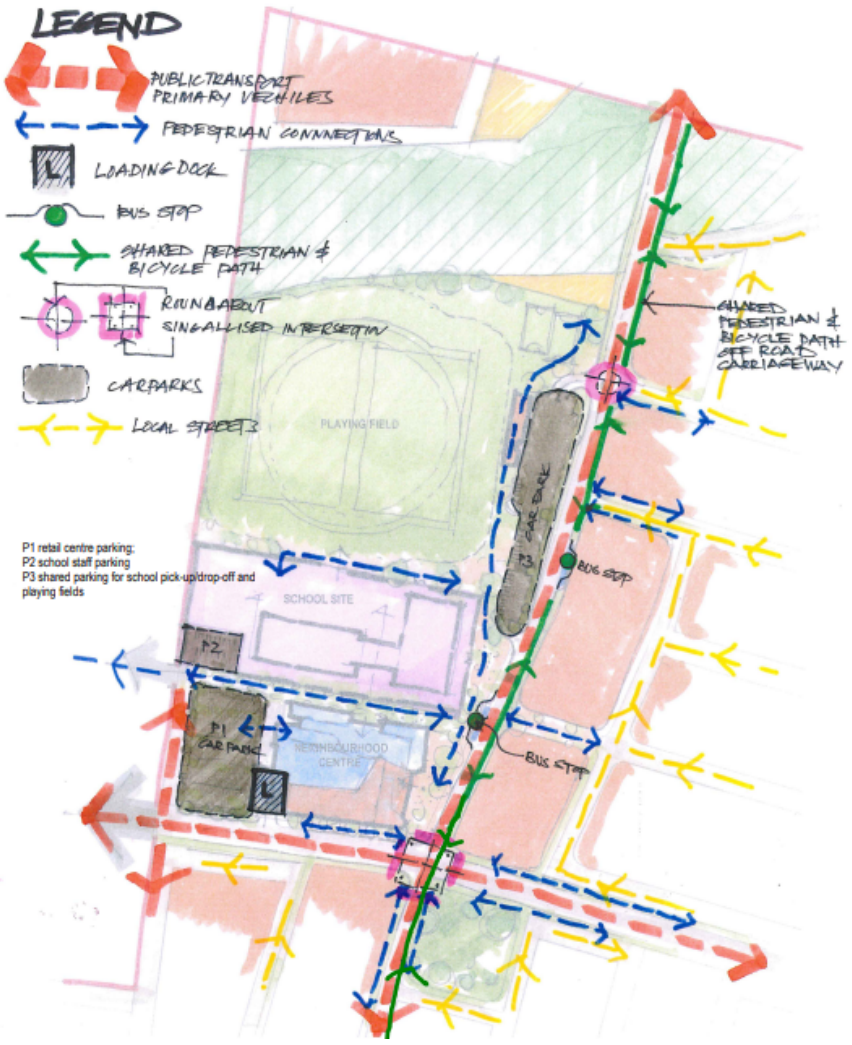

Figure 3.1.7 - Traffic Circulation and Parking Plan

3.1.5 Economic Assessment

Objective

a. To identify the range of viable retail and ancillary uses in and adjoining the neighbourhood centre

Controls

1. An Economic Impact Assessment shall be submitted with the first Development Application for the retail centre building in the neighbourhood centre.

2. The Economic Impact Assessment shall provide commentary on the following matters:

   - An economic feasibility of the range of retail uses that would likely operate at that location once the precinct has been fully developed for residential development. This assessment shall also include how to balance economic feasibility and urban design outcomes identified in Section 3.1.
   - An outline of urban and broader design considerations and also operational requirements for the range of retail uses and opportunities to achieve the urban design outcomes in Section 3.1. These requirements may include hours of operation, access to car parking, possible ancillary uses in the adjoining higher density residential area, taxis, bus stops and the main street, juxtaposition of various components of the neighbourhood centre.
   - An overview of considerations for a possible extension of the retail area to the west when the balance of Precinct 5 is developed.

Part 4 - Site Specific Controls

4.1 Access to Adjoining Landholding

Objectives

a. To maintain safe and efficient access for 689 The Northern Road, Bringelly (Lot 3 DP 1216380) to The Northern Road.

b. To allow for the continued unencumbered operation of the access handle utilised by Lot 3 DP 1216380 to access the Northern Road.

Control

1. Any subdivision involving the existing access handle, must retain the access handle through the registering of an easement for right of way, which can only be extinguished subject to the development and construction of the road network or alternative access that will connect Lot 3 DP 1216380 to The Northern Road.

4.2 Development near or on Electricity Easements

Objectives

a. To ensure that development on or near electricity easements does not impact on the integrity and safety of electricity infrastructure.

b. To ensure reasonable standards of amenity for residential development within the vicinity of electricity easements.

c. To encourage passive surveillance of electricity easements.

Controls

1. Development within and adjacent to electricity easements including, but not limited to, landscaping and fencing is to consider the appropriate and current TransGrid Development Guidelines including:
   - TransGrid Easement Guidelines, Third Party Development.
   - Subdivision and Development Guidelines.
   - Living and Working with Electricity Transmission Lines.
   - Relevant Endeavour Energy specifications.
2. Public roads within residential areas are encouraged adjacent to electricity easements to allow easy access to transmission towers and passive surveillance of open space as shown in Figure 4.2.1.
3. All proposed activities within electricity easements require approval from the relevant authority. Applicants should consult with electricity supply authorities prior to submitting a development application to Council. Evidence of approval is to be submitted with the development application.
4. No buildings are permitted in electricity easements without the approval of the relevant electricity supply authority.

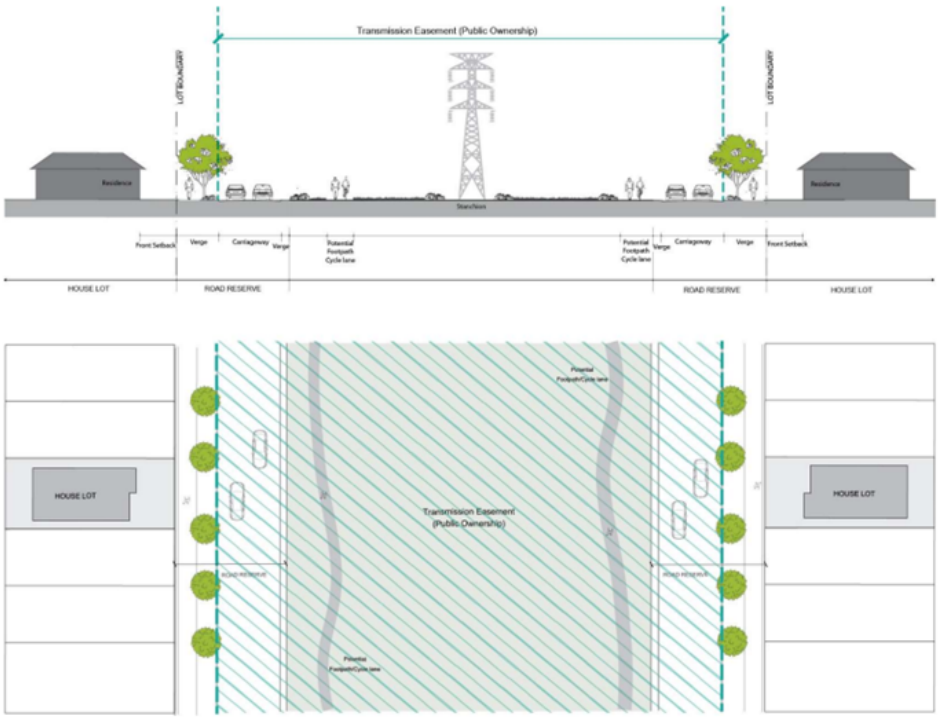

Figure 4.2.1 – Electricity Easements

Glossary

"Extreme Heat" is maximum air temperatures exceed 40°C.

"Green infrastructure" is a network of green spaces, natural systems and semi-natural systems, including waterways, bushland, tree canopy, green ground cover, parks and open spaces, that supports sustainable communities and is strategically designed and managed to support a good quality of life in an urban environment.

"Vegetated green roof" is vegetation covering at least 30% of available rooftop space which is not occupied by structures housing plant, equipment, or stairway accesses. A vegetated green roof should provide measurable environmental benefits. The vegetated green roof includes a vegetated layer, growing medium, and a waterproof membrane. Plants grown in sectioned lots are acceptable, however, potted plants/planter boxes which cover less than 30% of available rooftop space are not considered as a vegetated green roof. Additional to the minimum 30% vegetation cover, a vegetated green roof can include facilities for renewable energy, water collection infrastructure, walkways, furnishings, and the like.

"Green wall" is either free standing or part of a building that is partially or completely covered with vegetation. The wall may incorporate soil and/or inorganic material as the growing medium. There are two main types of green wall: green façades and living walls. Green façades are made up of climbing plants either growing directly on a wall or on specially designed supporting structures. The plant's shoot system grows up the side of the building while being rooted in the ground. With a living wall, modular panels are affixed to the wall and geo-textiles, irrigation and a growing medium combine to support a dense network of plants.

"Solar Reflectance Index" is (SRI) measures a surface's ability to reflect solar heat, as shown by a small temperature rise caused by the materials reflectance and emittance properties. It is defined so that a black surface is 0 and a white surface is 100.

"Sodicity" in soil is the presence of a high proportion of sodium ions relative to other cations. As sodium salts are leached through the soil, some sodium remains bound to clay particles—displacing other cations. Soils are often considered sodic when the amount of sodium impacts soil structure.

"Thermal emittance" is the rate at which heat is radiated from a surface. An object with high thermal emittance releases heat more quickly than an object with low thermal emittance.

"Urban Heat Island Effect" is increased heat in developed areas, when compared with the temperatures in nearby areas with less development.