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7.5 Glenmore Park Stage 3

7.5.1 Preliminary

This Part is called 'Glenmore Park Stage 3' and supports the objectives of the Penrith Local Environmental Plan 2010 to facilitate the sustainable development of residential, mixed use, education and open space on the site.

7.5.1.1 Land to Which This Part Applies

This Section applies to the land as shown on Figure E7.57 below.

Figure E7.57: Glenmore Park Stage 3 Subject Land

7.5.1.2 Relationship to Other Plans and Documents

In addition to the provisions of the Penrith LEP 2010, the Section must be read in conjunction with:

- any relevant Planning Agreement between the Glenmore Park Stage 3 landowners (or individual landowners) and Penrith City Council,
- the Glenmore Park Stage 3 Development Contributions Plan where relevant, and
- the relevant sections of Penrith Development Control Plan 2014.

In the event of any inconsistency between this Section and the city-wide sections, then the provisions of this Section shall apply.

7.5.1.3 Supporting Studies

The following supporting studies and documents have been used in the preparation of this Section:

a) *Glenmore Park Stage 3 Planning Proposal Bushfire Statement* prepared by Building Code and Bushfire Hazard Solutions (April 2022).

b) ~~*Glenmore Park Extension Planning Proposal Water Cycle Management Strategy Report prepared by J. Wyndham Prince (April 2023)*~~ *Water Cycle Management Strategy Report- Post Rezoning Glenmore Park Stage 3 (GP3), prepared by J. Wyndham Prince, Revision E, (9 October 2024)*

c) *Glenmore Park Extension – Residential Development Planning Proposal Comprehensive Traffic Impact Assessment* (CTIA) prepared by The Transport Planning Partnership (August 2022) & Addendum CTIA (November 2022)

d) *Extensions to Glenmore Park, Chain-O-Ponds and The Northern Road, Mulgoa – Road Traffic Noise Investigation* prepared by Renzo Tonin (March 2020).

e) *Public Domain and Open Space Strategy prepared by GLN Planning and Sturt Noble Associates (January 2023).*

f) *High Level Risk Assessment (HLRA) to identify contamination and salinity risks* prepared by SESL (April 2022).

g) *Geotechnical Assessment* prepared by D Katauskas (April 2022)

h) *Desktop Aboriginal Objects Due Diligence Assessment* prepared by Niche Consulting (March 2022)

i) *Historic Heritage Assessment* prepared by Niche Consulting (April 2022)

j) *Ecological & Riparian Issues & Assessment Report* prepared by Gunninah (April 2022)

k) *Social Impact and Infrastructure Assessment* prepared by Elton Consulting (March 2020) and *Addendum* (April 2022)

l) *Preliminary Retail Advice* prepared by Urbis (April 2022)

m) *Serviceability of Glenmore Park Stage 3* prepared by Qalchek (April 2022)

n) *Electrical servicing investigation* prepared by Power Line Design (April 2022)

o) *Glenmore Park Extension Visual Impact Assessment,* prepared by Urbaine and GLN Planning (March 2020)

These documents are available for reference from Council.

7.5.1.4 How to Use This Section

The section identifies key planning issues that Council will address when considering Development Applications. Each planning issue is structured in the following manner to provide a clear understanding of Council's expectations with regard to development:

Objectives:	Describe the rationale of the planning issue and what it is trying to achieve.
Performance Measures:	Qualitative measure against which a development's ability to achieve the objectives will be assessed. These measures provide flexibility for developers to achieve those objectives through a suite of design responses.
Development Controls:	Numeric based measures that will need to be achieved to provide acceptable solutions to meet the relevant objectives.

7.5.2 Structure Plan

7.5.2.1 Introduction

A. Vision

The vision and desired future character for Glenmore Park Stage 3 at Mulgoa seeks to produce a cohesive new residential community supported by new open space areas and environmental linkages, primary school and local shops. The community will:

a) Promote, service, and support a diverse, vital, and healthy community that is socially, environmentally, and economically sustainable, ensuring the quality of life for future generations.

b) Demonstrate new benchmarks in urban outcomes and quality lifestyles.

c) Be characterised by innovation, accessibility, connectivity, sustainability, and diversity, celebrating the natural and cultural heritage of the area.

d) Conserve, rehabilitate and enhance connectivity on the site and the key environmental attributes and managing natural systems within environmental corridor linkages and new open space areas.

e) Provide a Neighbourhood Precinct comprising local retail, shop top housing and neighbourhood amenities, located near a future school and active open space.

f) Provide different zone for housing to encourage diverse lot sizes, streetscapes, and housing typologies.

g) Include appropriate transitions to address the key interfaces to The Northern Road, Chain-O-Ponds Road, Mulgoa Nature Reserve, and environmental linkages.

h) Provide sustainability initiatives including measures to reduce the urban heat island effect.

i) Aim to maximise tree canopy outcomes within the public and private domain and open space areas to address the urban heat island effects in Penrith. A 40% tree canopy target is an aspirational target for development across the Glenmore Park Stage 3 rezoning area.

j) To strive towards a future network design and development that is built to establish sustainable travel behaviour from the outset and encourages a mode share towards public transport, walking and cycling

B. Objectives

a) To provide a clear planning framework for development of the subject lands.

b) To ensure that the most efficient use of urban zoned land is achieved.

c) To ensure development meets sound environmental planning practices and standards.

d) To encourage development that satisfies ecologically sustainable design principles.

e) To utilise and enhance the area's natural character of the lands to provide opportunities for a unique community identity.

f) To promote sustainable building forms.

g) To facilitate the provision of diverse housing forms reflecting the increasingly diverse profile of Penrith's communities.

h) To integrate all modes of transport to ensure there are efficient links within and between open spaces, neighbourhood centre and adjacent residential areas and services.

i) To protect and enhance watercourses as natural systems, riparian corridors and biological linkages.

7.5.2.2 Urban Structure

The rationale and elements of the urban structure for Glenmore Park Stage 3 is provided below:

a) The principal land use within Glenmore Park Stage 3 will be residential. The residential areas will straddle either side of a lineal open space network represented as a riparian Corridor.

b) A neighbourhood centre, active open space and primary school are centrally located to provide a focal point for the new community.

c) Vehicle access will be provided via Chain O Ponds Rd and The Northern Road, and a loop collector road will represent the primary organising element of the road network.

d) The loop collector road enables a legible road hierarchy to permeate throughout the subject lands.

e) Additional road connections through to the existing Glenmore Park suburb will also be provided at the northern edge of the release area.

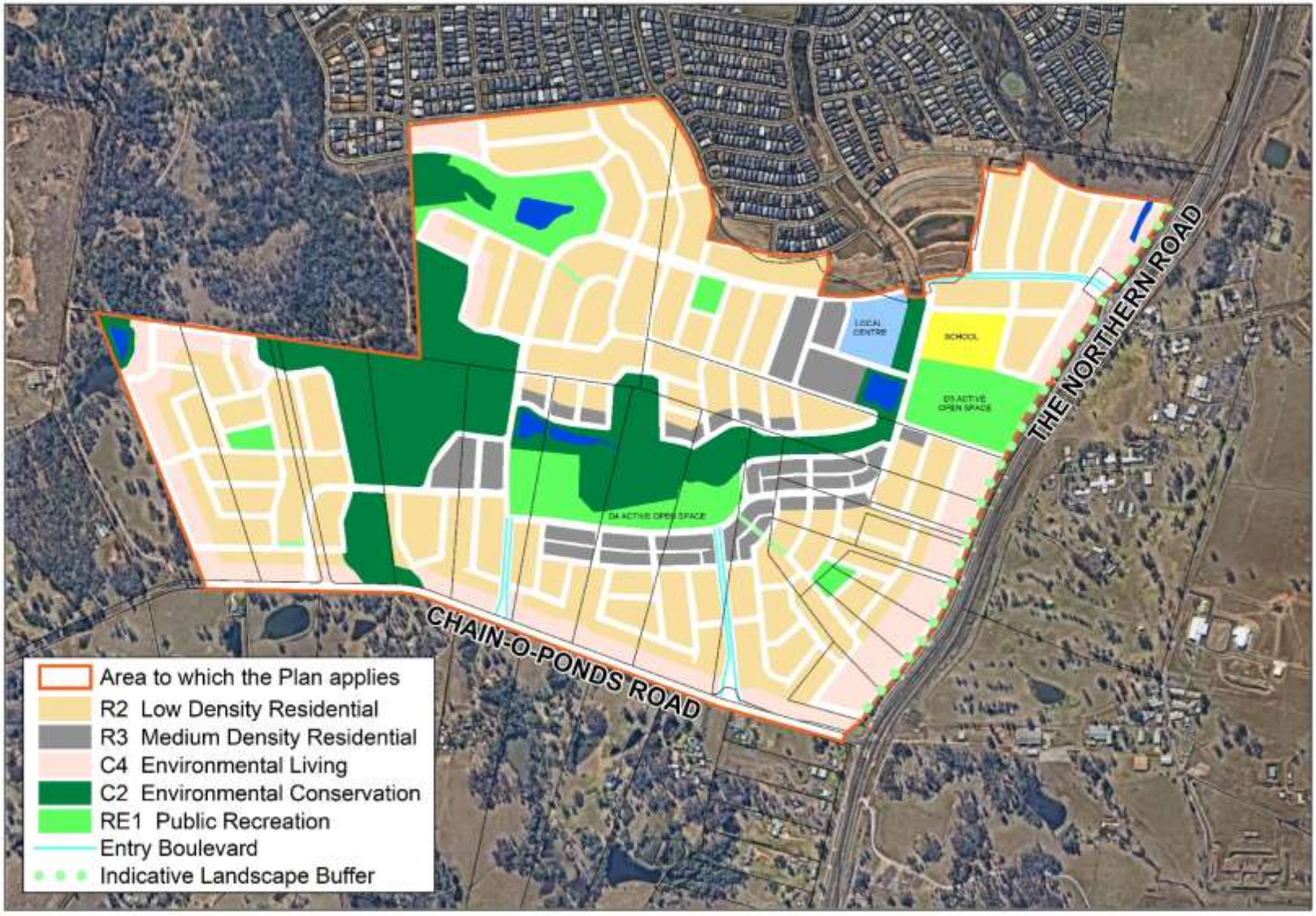
f) Active and passive open spaces will be distributed throughout the urban area, building on existing natural assets and providing a coordinated and integrated network throughout the release area.

g) Higher density forms of housing will be provided along corridor edges, around the Neighbourhood Centre, in good proximity to public transport routes and adjacent to active and passive open spaces.

h) Residential areas on the boundary of the release area facing The Northern Road, Chain O Ponds Road or the Mulgoa Nature Reserve will provide larger lots that provide a transition between urban areas and the surrounding rural landscape.

i) Glenmore Park Stage 3 Structure Plan establishes the structure and form for the planning and future development of the area according to the vision. This Plan is illustrated at Figure E7.58 with the main elements being described and expanded upon in more detail in Section 7.5.3 Public Domain. Section 7.5.7 Development Staging provides an indicative plan of how the release area will be developed.

Figure E7.58: Glenmore Park Stage 3 Structure Plan



7.5.2.3 Dwelling Yield

A. Objectives

a) To ensure the efficient use of zoned land and required infrastructure is achieved.

b) To ensure the sustainable provision of services and facilities required for diverse urban communities, including public transport.

c) To promote diverse residential housing forms that will accommodate a wide demographic profile.

d) To promote affordable housing opportunities in residential areas.

e) To ensure that lots in Environmental Living zones address interfaces and maintain a rural appearance.

f) To ensure appropriate restrictions to address acoustic requirements for construction of certain dwellings in proximity to The Northern Road.

g) To provide block sizes that maximise solar access.

h) To provide lot sizes and shape that reflect the broader urban structure.

i) To ensure development responds to site topography and natural assets.

Residential Areas

Development Applications on land zoned R2 Low Density Residential and R3 Medium Density Residential should be read in conjunction with the Clause for Glenmore Park Stage 3 and the relevant maps within the Penrith Local Environmental Plan 2010.

B. Performance Measures

a) In residential areas, incorporate a range of lot sizes within each Precinct.

b) Larger lots should be provided on street corners to allow development to address both street frontages.

c) Lot sizes should respond to site topography to reduce the need / size of retaining walls between lots.

d) Lots front streets and overlook open spaces to provide passive surveillance of those areas.

C. Development Controls

a) Dwelling yields must comply with the dwelling caps in Penrith LEP 2010.

b) The R2 zone will deliver up to 1,641 dwellings across different precincts within the development. The dwelling caps are based on an indicative average lot size above the minimum lot size of 300m2. Diversity of housing can be achieved by introducing smaller lots of down to a minimum 300m2 which in turn must be offset by larger lots

within the same Precinct. In the R2 zone dual occupancies will count toward the total maximum dwellings.

c) The R3 zone will deliver up to 512 dwellings including 16 studios (ie Fonzie flat style dwellings above garages across Area 11 only). The dwelling caps are based on an average lot size above the minimum lot size of 180m2. Diversity of housing can be achieved by introducing smaller lots down to a minimum of 180m2 which in turn must be offset by larger lots within the same Area. In the R3 zone dwellings above rear garages will count toward the total maximum dwellings.

d) Development consent can only be granted to a single development application for development on land zoned R3 Medium Density Residential that is both the subdivision of land into residential lots, and the erection of a building on each lot resulting from the subdivision, but only if the size of each lot is equal to or greater than 180m2.

e) Single residential dwelling lots within residential zones will be a minimum of 25m deep. Variations to this may occur on corner or less regular lot shapes.

7.5.3 Public Domain

7.5.3.1 Responding to the Site's Natural Features

7.5.3.1.1 Corridors

A. Objectives

a) To conserve biodiversity by providing vegetated environmental corridor linkages between significant natural vegetation units within the City.

b) To ensure that important natural features inform the urban structure of the place.

c) To provide high amenity areas for residents.

d) To retain, rehabilitate and restore native vegetation within environmental corridors.

e) Provide new works that enhance the amenity and enable the enjoyment of these spaces for passive recreation.

f) To ensure the quality and quantity of stormwater leaving the developed area does not adversely impact upon the health of downstream environmental areas and watercourses.

g) To provide terrestrial connectivity for fauna movement along the environmental corridors and provide appropriate fauna crossing measures.

h) To ensure uses not compatible with protecting and enhancing areas of high biodiversity value (Cumberland Plain Conservation Plan identified avoided lands) do not encroach into these areas.

B. Development Controls

These objectives may be achieved in open spaces and environmental corridors where:

a) Existing native vegetation is retained within environmental corridors and further enhanced and managed through the development of these areas as usable passive open space areas.

b) A Vegetation Management Plan that identifies how the corridor will be established is prepared, developed and implemented on site as part of its development.

c) Environmental corridors are to be fully vegetated with appropriate local native vegetation (ie. fully structured trees, shrubs and groundcovers) and provided in accordance with a Vegetation Management Plan.

d) Where native vegetation is retained in riparian areas of environmental corridors, it is to be rehabilitated and managed consistent with the Vegetation Management Plan and the *Guidelines for riparian corridors on waterfront land*. Pedestrian paths/cycleways, water management basins and drainage infrastructure (which includes pathways for vehicular access to basins) should avoid native vegetation.

e) Works in corridors such as cycleway/pedestrian paths are generally located outside core riparian zones. Paths should be kept to the edge of these areas and aim to avoid existing vegetation retained and provide a managed edge.

f) The corridors and other topographical features are represented as special places within the urban form.

g) Significant revegetation of the environmental corridors occurs as part of development.

h) Corridors serving riparian functions can incorporate shared pathways and water quality treatment devices. Provision of water infrastructure should align with the SEPP (Biodiversity & Conservation) 2021 and Cumberland Plain Conservation Plan Guidelines for Infrastructure Development.

i) The design of the bridging structures over the corridor ensure the following:

    i. 1% AEP flood conveyance.

    ii. Flora and fauna connectivity.

    iii. Scour protection.

j) Fauna crossings should be designed in consultation with experts on the target fauna species that may potentially use the crossings and experts in fauna crossings so that structures are effective.

k) An effective barrier should be provided along the entire perimeter of environmental corridors to prevent unauthorised vehicular access and prevent inadvertent damage. The barrier to be provided should be an open and low perimeter fence or low bollard type barrier.

l) Design of stormwater detention basins within the east west corridor must allow sufficient areas north and south of the basin to facilitate terrestrial fauna movement.

Figure E7.59: Master Plan showing indicative environmental corridors adjacent to open space area

7.5.3.1.2 Bushfire Hazard Management

A. Objective

a) To manage the risk to life and property assets from bushfire events while ensuring that the natural environment including riparian corridors are protected and enhanced.

B. Development Controls

The objectives may be achieved where:

a) Asset Protection Zones (APZs) of a scale and type suitable to the NSW Rural Fire Service are provided between all built forms and adjacent bushland units.

b) APZ's must be provided and maintained in accordance with the Planning for Bushfire Protection 2019 and State Environmental Planning Policy (Biodiversity & Conservation) 2021 Chapter 13.

c) No burdens are to be placed upon Council to maintain an APZ.

d) All development within bushfire prone lands is to reference and be consistent with Planning for Bushfire Protection 2019.

e) Parking provision on perimeter and non-perimeter roads is to be provided in accordance with Section 5.3.2 of *Planning for Bush Fire Protection 2019* as follows:
   i. outside the minimum carriageway width of 8m for perimeter roads, and
   ii. outside the minimum carriageway width of 5.5m for non-perimeter roads.

f) Fire hydrant flows, pressures and installations (spacing, design and sizing) comply with the relevant clauses of Australian Standard As 2419.1:2005 and not be located on any road carriageway.

7.5.3.1.3 Water Management

A. Objectives

a) To maintain the stability and integrity of the finished creek profile.

b) To ensure the quality of water leaving the urban areas does not adversely impact upon the health of downstream environmental areas and watercourses.

c) To reduce the volume of stormwater run-off from the site.

d) To ensure stormwater runoff is adequately treated before it enters the riparian corridors.

B. Performance Measures

a) Trunk drainage works are provided as an initial stage of development of the release area.

b) Stability within the watercourses prevents bank erosion.

c) The stormwater management regime provides treatment trains including bio- retention swales and rain-gardens/basins to improve the quality of urban runoff and achieve a minimum percentage reduction of stormwater pollutants before it enters the creek channels. These are to be delivered at the timing necessitated by the adjoining development works.

d) The active playing fields, school site and neighbourhood centre incorporate on-site water quality treatment devices as part of their development.

C. Development Controls

a) Achieve Council's downstream stormwater quality objectives and performance measures in accordance with the Water Management Section of this Plan.

b) The locations of the corridors and water quality treatment devices are to be generally consistent with that represented as shown in the Water Cycle Management Strategy See Figure E7.60.

c) The existing dam labelled VB2 (See Figure E7.60) located in District Park 1 is to be reconstructed generally within the same location and function as a water quality treatment and detention facility. The reconstruction works will be required to achieve safe grades at the edges and meet water quality performance measures.

d) Design of stormwater detention basin labelled MB3 within the east west corridor must allow sufficient areas north and south of the basin to facilitate terrestrial fauna movement.

e) Dam reconstruction works should include, relocation of any important native aquatic fauna that currently use the dams, to restock the new waterbody after construction and/or their relocation to appropriate nearby habitat.

f) The stormwater treatment regime includes a treatment train to achieve the reduction of stormwater discharge and pollutants by including the following elements:

   i. Rainwater tanks.

ii. Gross pollutant traps at discharge point to basins.

~~iii. On-lot treatment for commercial lots~~

iv. Bio-retention raingardens

v. Feature water bodies (ponds), with wetlands.

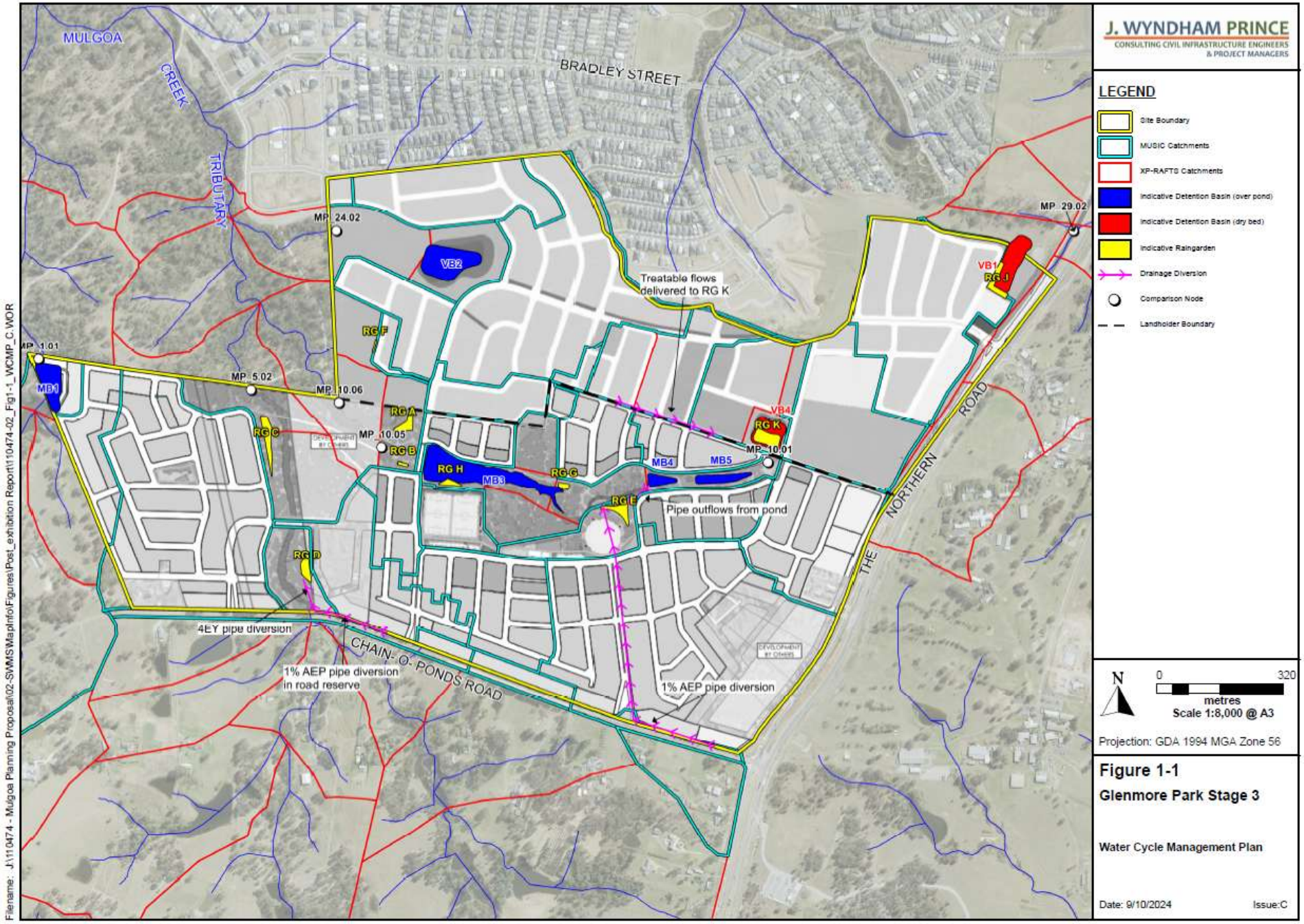
~~a) Detention basins including wet basins which have a component of permanent water bodies and dry bed detention basins.~~

g) Detention basins are to be located throughout the development to attenuate stormwater runoff as follows: -

i. Three (3) of these detention basins (MB1, MB3, VB2) are proposed to be constructed as wet bed basins, over the top of permanent waterbodies.

ii. Two (2) detention basins (VB1 and VB4) are proposed as “dry bed” detention basins.

Figure E7.60 Indicative Water Cycle Management



7.5.3.1.4 Flood Management

A. Objectives

a) To manage the risk to life and property assets from flooding events.

b) To allow the riparian corridor to function as a naturally occurring waterway.

c) To manage most flood waters within the site.

B. Development Controls

a) The detention and storage of flood waters are to be in accordance with NRAR guidelines and designed in consideration of Council's ongoing maintenance obligations.

b) Flood waters are managed within the C2 zoned lands and not to encroach onto active open space areas.

c) A Stormwater Management Plan identifying how flood waters will be managed is prepared and implemented on site as part of this development.

d) Refer to the flood liable provisions of Section C3 Water Management of this Plan and the Water Cycle Management Strategy for further details.

e) Stormwater detention is provided to reduce the 1-year ARI post development flows to pre development flows.

7.5.3.1.5 Trees

A. Objectives

a) To protect and embellish local vegetation and habitat.

b) To integrate significant trees within the landscape of the new urban area.

c) To create a new urban area that provides extensive tree canopy in open space areas, the private domain and through street tree planting to mitigate impacts from the urban heat island effect.

d) Aim to maximise tree canopy within the public and private domain and open space areas to address the urban heat island effect in Penrith consistent with the Public Domain and Open Space Strategy.

B. Development Controls

These objectives may be achieved where:

a) In developable areas (certified urban capable land):

   i. retention and conservation of existing trees must consider the requirements of the Cumberland Plain Conservation Plan Mitigation Measures Guideline.

   ii. Where practical, existing mature trees and significant trees are conserved for their natural functions and aesthetic value, as part of the landscaped area of future development.

b) Open spaces are co-located with existing stands of significant trees.

c) No disturbance to existing ground levels occurs within the drip line of existing significant trees.

d) Existing native vegetation in riparian corridors will be protected and corridors revegetated to fully structured native vegetation communities to provide habitat and movement for flora and fauna species in line with the Vegetation Management Plan.

e) The delivery of tree canopy within open space areas, street planting and the public and private domain is to align with the tree canopy targets provided in the Public Domain and Open Space Strategy. See section 7.5.3.4. Open Spaces for three canopy targets.

f) Applicants should refer Section C14 Urban Heat Management section of this DCP.

g) Species selection and planting along The Northern Road and within the landscape buffer must consider existing overhead electricity infrastructure.

7.5.3.2 Access and Movement

7.5.3.2.1 Urban Structure

A. Objectives

a) To provide a clear urban framework for the entire release area that informs the location of land uses.

b) To identify a clear hierarchy for movement within the subject lands and adjacent urban areas.

c) To promote a safe and efficient movement network for all users.

d) To promote public and active transport options.

B. Performance Measures

These objectives may be achieved where:

a) The street network is generally consistent with the hierarchy as shown in the Road Hierarchy Plan (Figure E7.63) and outlined in the Section 7.5.3.3.3 Road Sections and facilitates walking and cycling for access to daily activities; and also enables direct local vehicle trips within the neighbourhood and to local activity points.

b) The suburb has a coherent urban system of compact walkable neighbourhoods which cluster to form a suburb with a high degree of street connectivity.

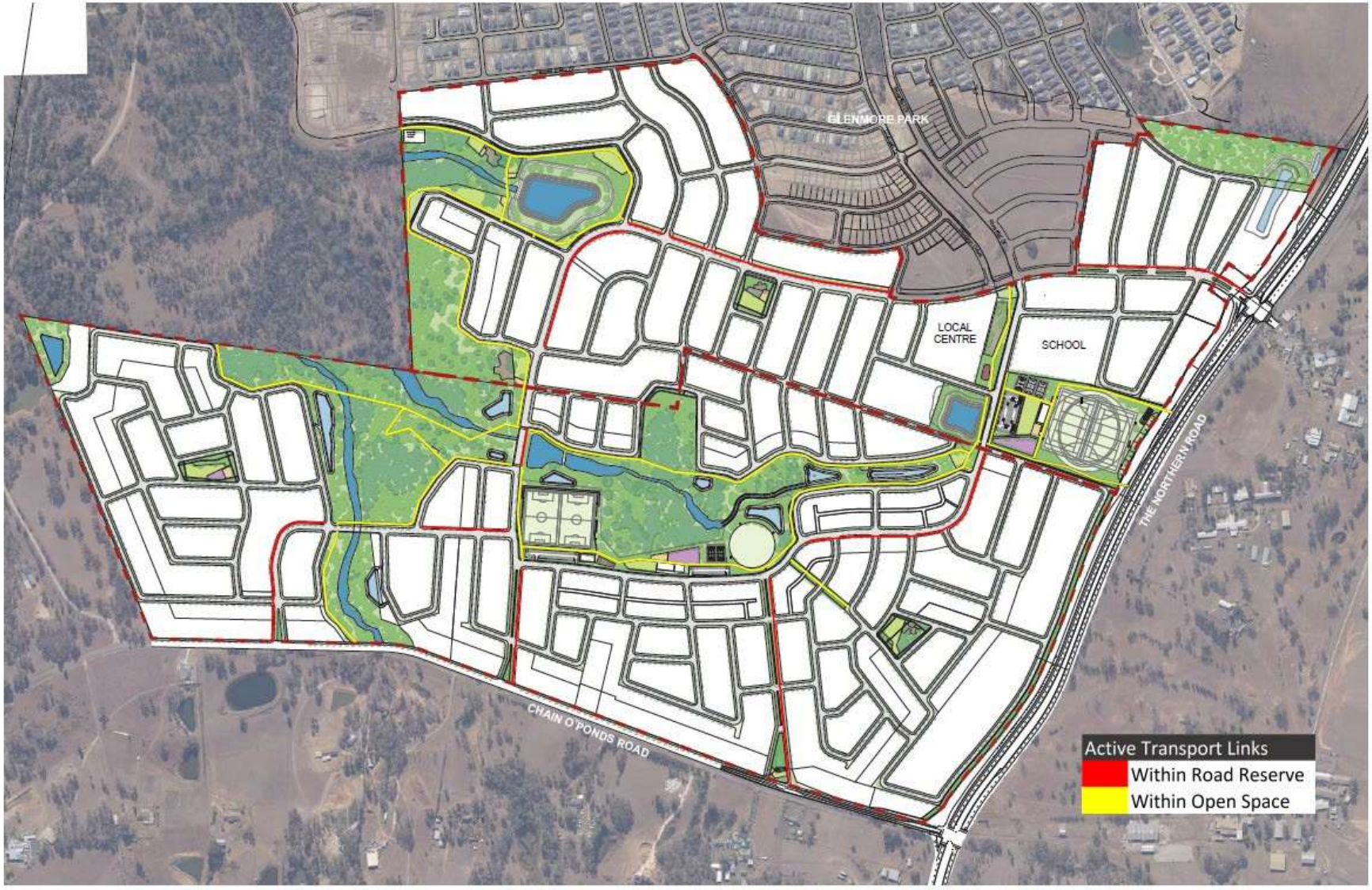
c) Neighbourhood identity is reinforced by the location of mixed use and open space areas at focal points within convenient walking distance for residents.

d) The vehicle, cyclists and pedestrian networks, land-use mix, and lot density assist in reducing local vehicle trips, travel distances and speeds, maximising public transport effectiveness, and encouraging walking and cycling to daily activities.

e) Active transport links, pedestrian paths and cycleways to be included generally in accordance with the Indicative Active Transport Plan Figure E7.61.

Figure E7.61: Indicative Active Transport Plan

GLENMORE PARK STAGE 3 MASTERPLAN



7.5.3.2.2 Vehicular Movement

A. Objectives

a) To create a legible road hierarchy.

b) To provide a high degree of connectivity within the site and between the site and the adjoining areas.

c) To minimise the negative impacts of through traffic and 'rat running'.

B. Performance Measures

These objectives may be achieved where:

a) A hierarchy of streets should reflect the function and traffic load of each street in a network, minimise travel distances, maximise access to facilities and services and assist people find their way.

b) A loop type internal collector road is provided that can accommodate bus movements and passes the key community and open space assets, with links to appropriate roads in GP2. See Figure E7.62.

c) The street network connects with adjacent collector routes and neighbouring streets to maximise movement efficiency and social connection.

d) Two vehicular access points to adjoining areas will be provided to the north at locations shown at Figure E7.63.

e) The predominant local street pattern is an east-west axial grid that maximises quantity of lots with a north-south axis.

f) The street network takes account of the topography and vegetation and respects any existing or potential site assets.

g) The street network allows all development to address the street.

h) Rear lanes may be provided in medium density areas to assist in reducing potential pedestrian and vehicle conflicts within the broader road network.

C. Development Controls

a) For street blocks located on residential zoned land have a maximum length of 300m and a maximum depth of 90m.

b) Cul-de-sacs are discouraged, however where their use is justified, will have a maximum length of 60m and only be used to improve the lot efficiency of deep or odd shaped street blocks and will always have their head located away from dominant movement direction.

7.5.3.2.3 Public Transport

A. Objectives

a) To increase opportunities for use of public transport.

b) To enable the efficient operation of bus routes on designated roads.

c) To encourage the early introduction of bus services within the estate.

B. Performance Measures

These objectives may be achieved where:

a) The bus route facilitates connections between Precincts, the existing Glenmore Park estate and key facilities within the subject lands, local facilities and the Penrith CBD.

b) A 10% modal shift from private vehicle to active and public transport modes is reached or exceeded.

c) Bus routes and sheltered bus stops are designed, constructed and clearly marked.

d) The planning principles for public transport are shown at Figure E7.62 are delivered as part of the development.

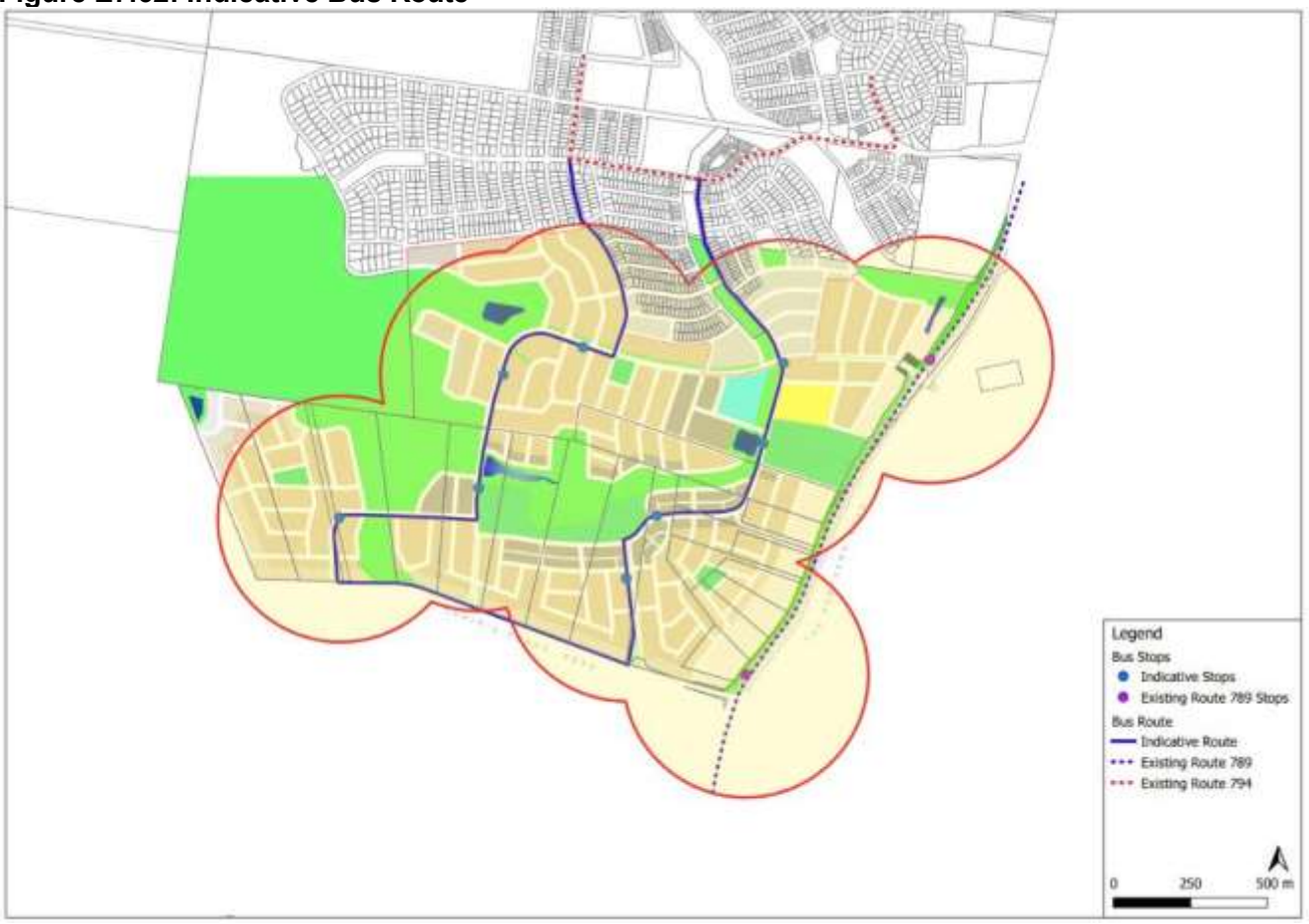
e) The early delivery of bus services as the community grows.

C. Development Controls

a) Dwellings are predominately within 400m distance from the designated bus route.

b) The bus route will be designed and constructed generally in accordance with the road profiles identified at Section 7.5.3.3.3 Road Sections.

Figure E7.62: Indicative Bus Route



7.5.3.2.4 Pedestrians and Cyclists

A. Objectives

a) To promote active transport options by providing safe and convenient routes to and from key facilities and open space areas within the community and the existing Glenmore Park suburb.

b) To promote an active and healthy lifestyle.

c) To promote casual social interaction among neighbours.

d) To promote Universal Design principles in all new facilities.

e) To provide combined cycleways and pedestrian paths that connect key destinations within the development:

   a. at the edge of corridors and district open spaces and

   b. along Collector Roads where there is development on both sides.

B. Performance Measures

These objectives may be achieved where:

a) Footpaths are an integrated element of the normal street network and align with the road profiles in Section 7.5.3.3.3 Road Sections part of this chapter.

b) The cycle network is a combination of on street shared pathways and shared pathways through open space that link the main points of attraction and significant natural features.

c) Combined pedestrian and cycle pathways in open spaces are provided they should generally be aligned parallel with its interface to the street to take advantage of street lighting and allow for casual surveillance by residents and drivers. Where streets are adjacent to environmental corridors or open space areas these paths will be provided within the corridor or open space.

d) Pathways are designed and constructed wherever possible and practical to be of appropriate width, longitudinal gradient and sight distance.

e) Kerb details cater for all users, including aged people, people with prams and in wheelchairs, and people with disabilities, and take account of Universal Design principles.

f) Street landscaping is provided to enhance the appearance of the street and pedestrian environment, including providing protection from the sun.

g) A pathway network is designed, constructed and clearly marked generally in accordance with Figure E7.61 with appropriate connections to existing Glenmore Park, linking the main points of attraction and significant natural features.

h) Bicycle racks are provided as part of all developments that attract significant public patronage.

i) Pedestrian paths and cycleways that are located within the riparian corridor must be in accordance with the Department of Water and Energy's 'Design and Construction of Paths, Cycleways and Accessways along Watercourses and Riparian Area Guideline 2007'.

C. Development Controls

a) Pathways are to be in accordance with dimension requirements under Section 7.5.3.3.3Road Sections.

b) Footpaths are to be provided on both sides of the road in accordance with Section 7.5.3.3.3 Road Sections.

7.5.3.3 Streetscapes

7.5.3.3.1 Landscape Character

A. Objectives

a) To provide an attractive and sustainable residential community.

b) To ensure development contributes to cohesive streetscape and desirable pedestrian environments.

c) To provide safe and secure environments for pedestrians and cyclists.

d) To promote casual social interaction among neighbours.

e) To encourage an active and healthy and active lifestyle.

f) To ensure street layouts provide well distributed public open spaces that contribute to the legibility and character of the development.

g) To promote landscape treatments that is appropriate to the character and constraints of each locality.

h) To contribute to the reduction of urban heat island effect as per Section C14 Urban Heat Management of this DCP and aim for a continuous canopy cover to reduce urban heat and improve connectivity across the site.

B. Performance Measures

These objectives may be achieved where:

a) The release area landscape includes streets lined with tall tree species.

b) Landscaping is provided to create a character that is distinct to each street category and as relevant to interface with surrounding street network and public domain.

c) Streets are designed to establish or enhance the unique character of the area by responding to its topography, desirable views or local features

d) The carriageway is visually contained to promote steady, predictable traffic speeds by:

   i. Clearly defining the boundary between pedestrian and vehicle zones.

   ii. Providing on-street parking.

   iii. Planting street trees at regular spacing within the carriageway and/or verge.

e) Boundaries between street verges and private front yards are clearly defined and houses are designed to encourage passive surveillance.

f) Landscaping helps define boundaries, create continuity and provide shade.

g) Water sensitive urban design elements are integrated into street verges.

h) On-street parking is provided at a rate appropriate to the anticipated demand while ensuring the landscape character and street function is not compromised.

i) Design details such as footpath and driveway cross-overs are uniformly applied to make the street character more consistent.

j) Street signage is designed to be complementary to the overall streetscape design and character and signage clutter is avoided.

C. Development Controls

a) Street trees are provided at a rate of one tree for every 10m of site frontage.

b) Street trees are provided at minimum size of 75 litres and fitted with tree guards.

c) Species selection is appropriate to the character and constraints of the locality.

7.5.3.3.2 Street Furniture and Public Art

A. Objectives

a) To visually define and promote attractive public spaces.

b) To enhance public spaces so that they are vibrant, safe and welcoming.

c) To create a sense of identity for the area by building distinctive places which reflect cultural diversity and local heritage and illuminate contemporary significance and meaning.

d) To facilitate cultural identity through art and design in public places, with the engagement of the local community.

e) To enhance creative cultural life of the community and place, liveability and amenity through the provision of public art and interpretive elements.

B. Performance Measures

a) Public art is used to define entry ways to the new release area.

b) Public art is provided throughout key public domain areas.

c) Public art may be freestanding art objects or works integrated into building facades, other built edges, and landscaping adjoining public spaces.

d) Public art should contribute to a sense of Place, pride and local identity, with themes that reflect Aboriginal significance of the local area, local heritage, local stories, local environment or community.

e) Street furniture maximises pedestrian comfort, convenience and amenity.

f) Street furniture forms an integrated element of the streetscape.

C. Controls

a) Street furniture is integrated into the design of all public spaces and includes:

   i. Seats.

   ii. Litter bins.

   iii. Drinking fountains.

   iv. Lighting.

   v. Street and information signs.

   vi. Bicycle racks.

   vii. Planter boxes.

   viii. Other items suitable to the function of each public space.

b) Street furniture throughout precincts should be consistent in design and style.

c) Street furniture is to be located so as not to impede mobility, in accordance with AS1428:1-4.

d) Location and detailing of all proposed street furniture and public art is indicated on Landscape Plans submitted with Development Applications.

e) Public art in the public domain will be provided consistent with a cohesive public art strategy developed for the whole development to define the general placement and 'story' of the artworks. Development of the Public Art Strategy will require the engagement and commissioning of professionals in the area of public art and placemaking. Public art is to be designed and implemented in accordance with Council's Place Making and Public Art Strategy.

7.5.3.3.3 Road Sections

A. Objectives

a) To provide a safe and effective movement network for all users.

b) To encourage responsible driving behaviour, particularly low travel speeds on residential streets.

c) To cater for the efficient provision of public utilities.

d) To incorporate the natural features of the site including movement of stormwater, existing and new trees.

e) Streets provide appropriate environments for vehicles, bicycles and pedestrian usage.

f) The upgrading for Chain O Ponds Road will include elements to preserve the rural character.

g) To promote landscape treatments that are appropriate to the character and constraints of each locality.

h) Streets provide footpaths with extensive canopy cover to shade both paths and road pavements.

i) Streets encourage cycling, with a network of shared paths provided connecting to key open spaces and facilities.

j) Water sensitive urban design is considered holistically across the site and integrated into the street network.

k) Street design and planting to contribute to the reduction of urban heat island effect as per Section C14 Urban Heat Management section of this DCP.

B. Performance Measures

These objectives may be achieved where:

a) Streets are designed to ensure vehicle speeds are naturally controlled and it is clear where vehicles can park, cyclists can ride and where pedestrians should walk or cross.

b) Opportunities for walking and cycling are well provided for.

c) The materials, line marking and landscaping of the streets clearly delineate the travel lanes from parking “lanes”.

d) Where the provision of parking “lanes” is included in the road reserve, they are clearly defined as parking bays defined by means of line marking and/or landscape/tree planting bays.

e) Parking on the grassed verge or on parks is restricted.

f) Intersections are designed for the safe and convenient passage of vehicles, pedestrians and cyclists including the use of thresholds within pavements to reinforce continuity of shared paths.

g) Kerb radii at intersections and junctions are kept to a minimum, subject to satisfying required turning templates, to keep pedestrian crossing distances to a minimum, to control the speed of turning vehicles and to reduce the visual impact of large junctions.

h) Speed control devices are provided to achieve target speeds where required.

i) Any speed control devices, inclusive of road narrowing, are to be designed to take into account the needs of cyclists.

j) Varying degrees, relative to road hierarchy, of delays or the need for driver co-operation due to vehicles parking on local roads is an acceptable, traffic calming outcome.

k) Upright kerbs are to be used for collector roads and adjacent to open spaces, except as otherwise stipulated.

l) Development occurs generally in accordance with the road hierarchy demonstrated at Figure E7.63 and Table 1.

m) Minimise pavement areas to combat the heat island effect, reduce lifecycle costs and increase opportunities to plant trees with larger canopies within wider verges

n) Streets provide a logical hierarchy to maximise accessibility to all parts of the community and provide an appropriate response to address key interfaces.

Figure E7.63 Road Hierarchy Plan

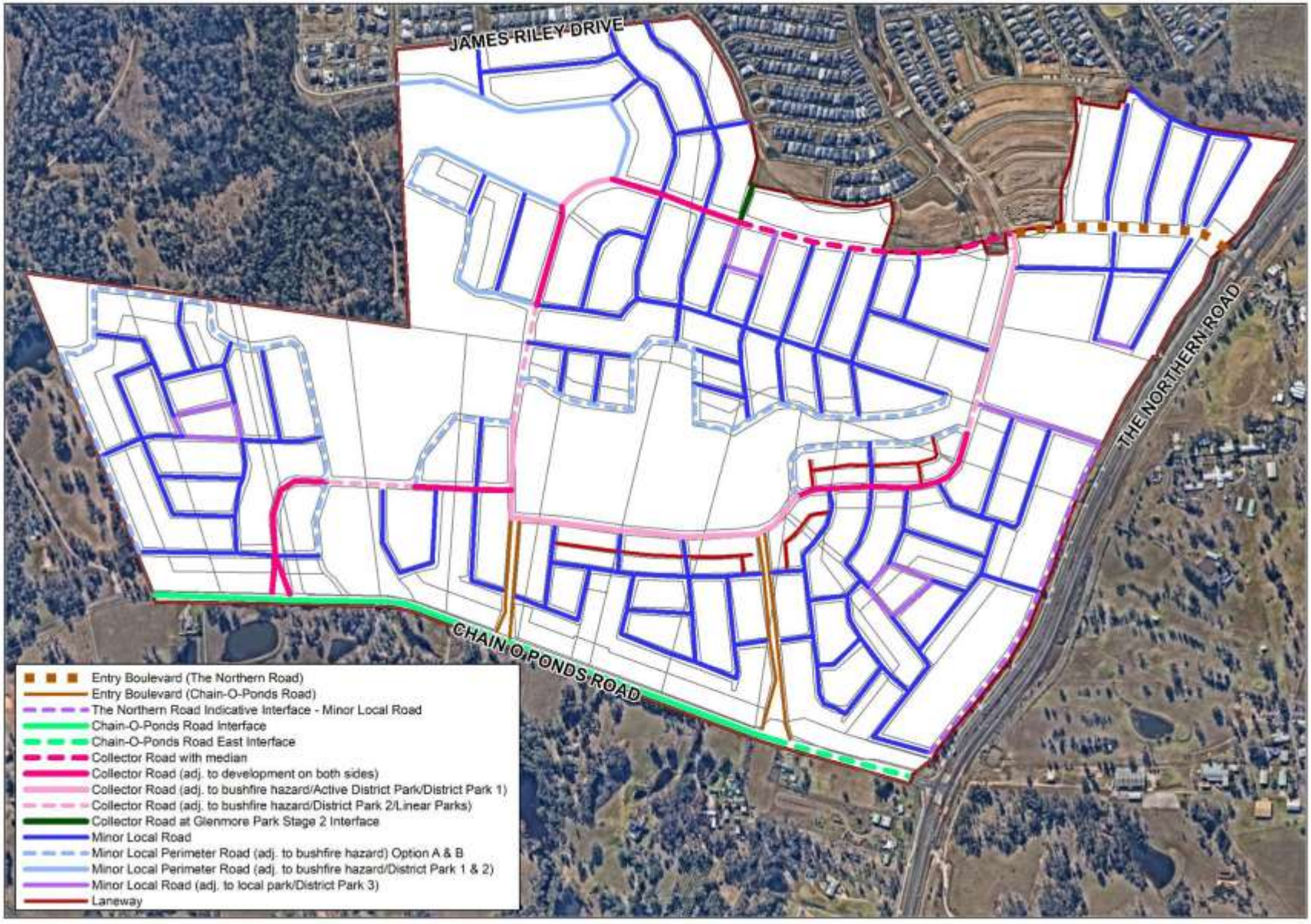


Table 1 - Summary Road Typologies

Figure	Road Type / Figure Reference (m) metres	Verge	KSL **	Road	Median	Road	KSL **	Verge	Road Reserve	Path	
	Special Purpose Roads										
E7.64	Entry Boulevard (The Northern Road)	5	3.5	3.5	3	3.5	3.5	4	26	2.5	1.5
E7.65	Entry Boulevard (Chain O Ponds)	5	2.5	3.5	3	3.5	2.5	4	24	2.5	1.5
E7.66	The Northern Road indicative interface - Minor Local Road	3.5	0	4	0	4	0	1	12.5	1.5	0
E7.67	Chain O Ponds Road interface	4	2.5	3.5	0	3.5	2.5	4	20	0	2.5
E7.68	Chain O Ponds Road – East – interface	2	2.5	3.5	2	3.5	2.5	4	20	0	2.5
	Collector Roads										
E7.69	Collector Road with median	3.8	2.5	3.5	3	3.5	2.5	5	23.8	1.5	2.5
E7.70	Collector Road (Adjacent to development on both sides)	3.8	2.5	3.5	0	3.5	2.5	5	20.8	1.5	2.5
E7.71	Collector Road (Adjacent to Bushfire hazard/ Active District Park/District Pk 1) *	3.8	2.5	4	0	4	2.5	1	17.8	1.5	0
E7.72	Collector Road (Adjacent to Bushfire hazard/ District Park 2 / Linear Parks) *	3.8	2.5	4	0	4	0	1	15.3	1.5	0
E7.73	Collector Road – at Glenmore Park Stage 2 boundary (See also Fig. E7.27)	3.8	2.5	3.5	0	3.5	2.5	3.8	19.6	1.5	1.5
	Minor Local Road										
E7.74	Minor Local Road	3.8	0	4	0	4	0	3.8	15.6	1.5	1.5
E7.75 & E7.76	Minor Local Perimeter Road (Adjacent to bushfire hazard) Option A & B *	3.5	2.5	4	0	4	0	1	15	1.5	0
E7.77	Minor Local Perimeter Road (Adjacent to bushfire hazard/ District Park 1 & 2) *	3.5	2.5	4	0	4	2.5	1	17.5	1.5	0
E7.78	Minor Local Road (Bushfire hazard Non-perimeter) *	3.5	2.5	2.75	0	2.75	2.5	3.5	17.5	1.5	1.5
	Note: Local Roads identified by NSW Rural Fire Service as 'Non-Perimeter' Roads must meet RFS clear carriageway requirements. A performance solution may be considered by Council with the concurrence of NSW RFS.										
E7.79	Minor Local Road (Adjacent to local park / District Park 3)	3.8	0	4	0	4	0	1	12.8	1.5	0
E7.80	**Laneway**	0.5	0	3	0	3	0	0.5	7	0	0

* Perimeter Roads and Non-Perimeter Roads as per NSW RFS Planning for Bushfire Protection 2019 ** KSL – Kerbside lane / Parking provision

Figure E7.64: Entry Boulevard Road – The Northern Road

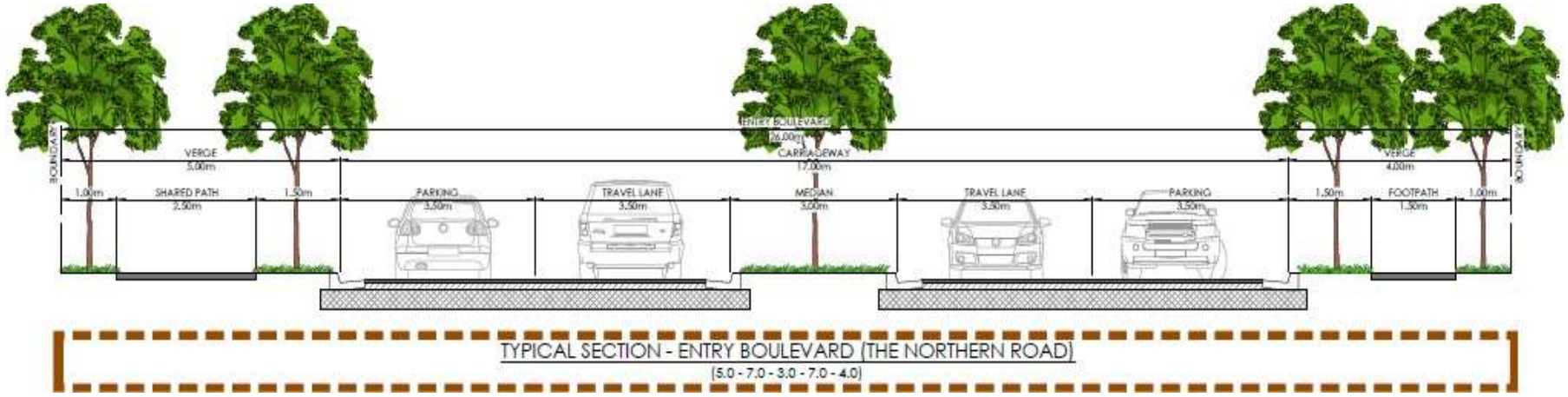


Figure E7.65 Entry Boulevard Road - Chain O Ponds Rd

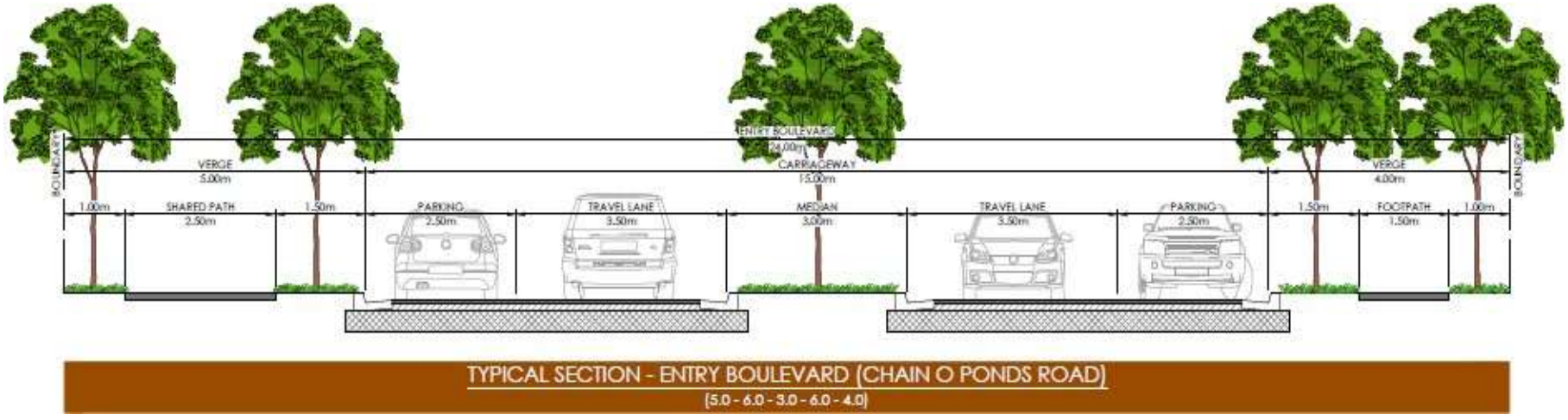


Figure E7. 66 The Northern Road indicative interface

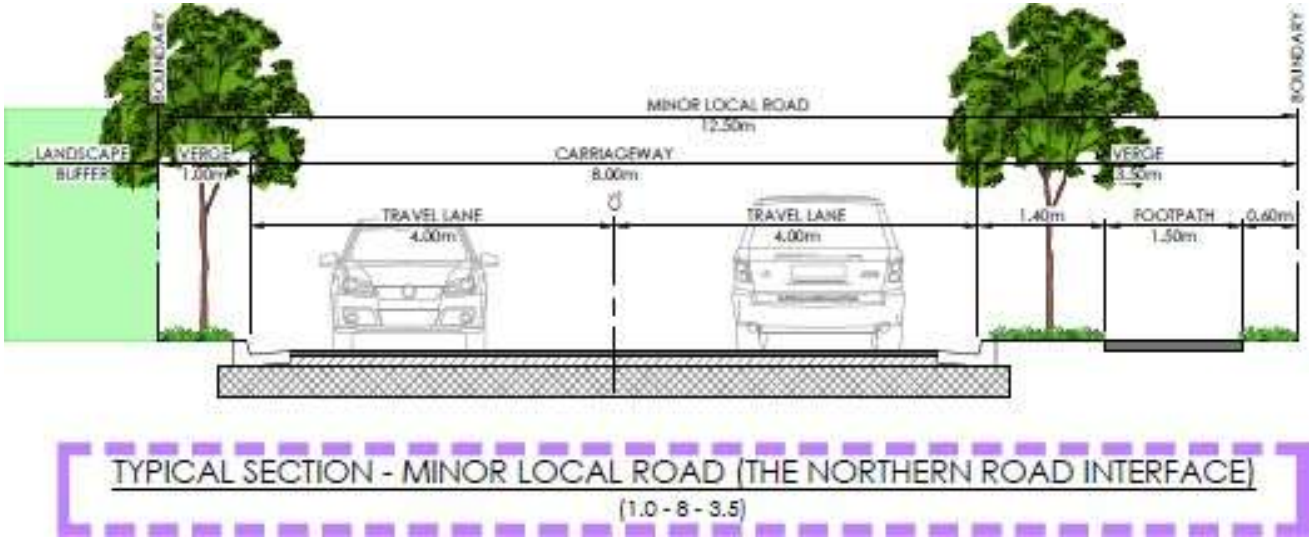


Figure E7.67: Chain-O-Ponds Road Interface

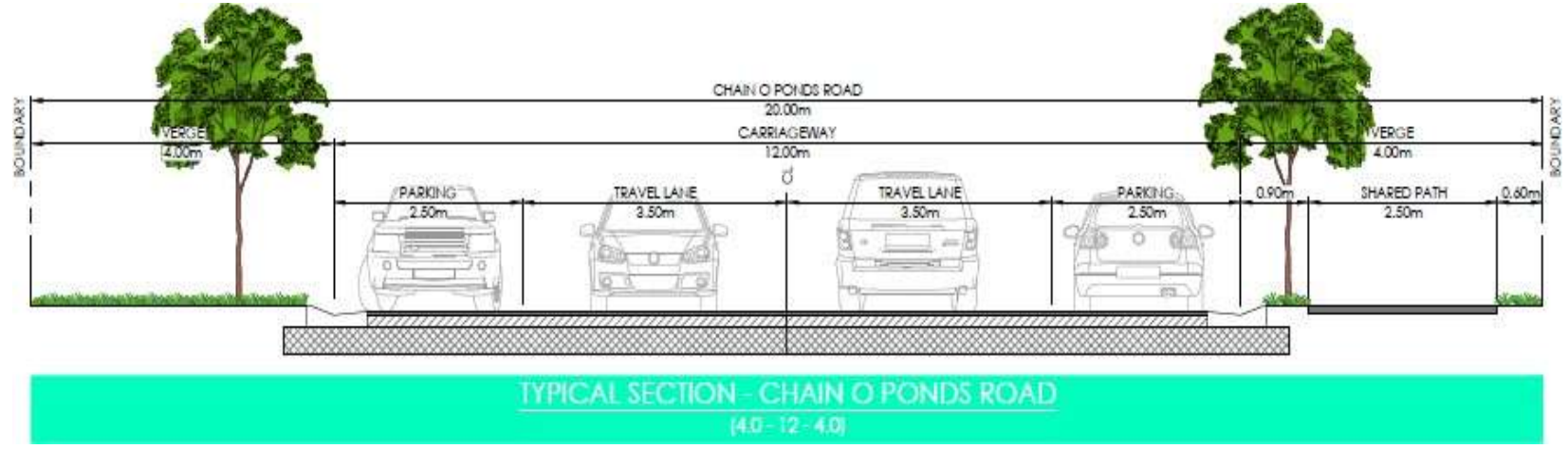


Figure E7.68 Chain O Ponds Road Interface EAST

Figure E7.69 Collector Road with Median

Figure E7.70 Collector Road (Adjacent to development on both sides)

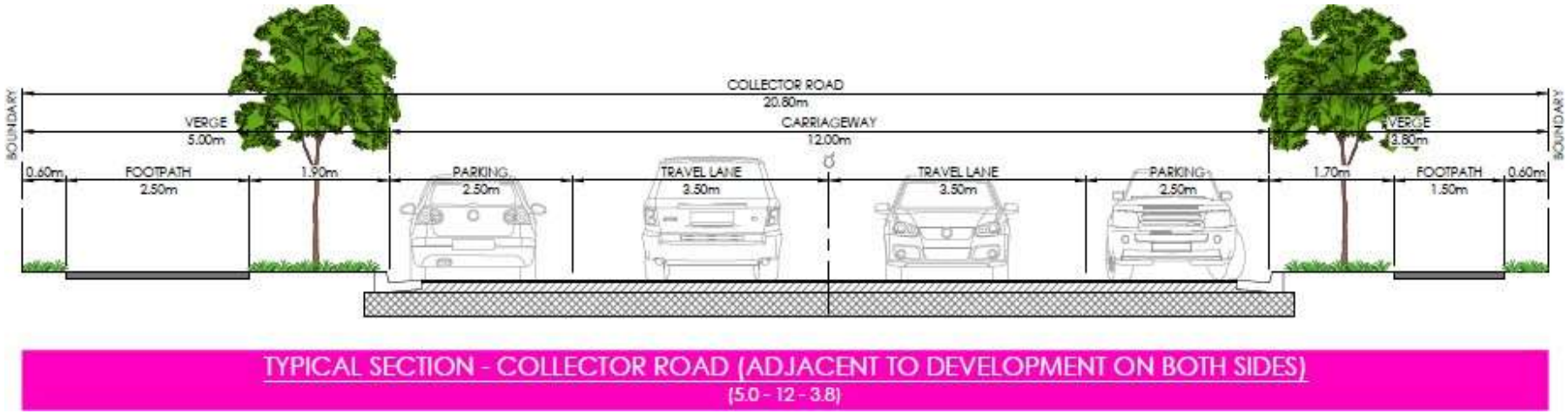


Figure E7.71 Collector Road (Adjacent to bushfire hazard / Active District Park/District Park 1)

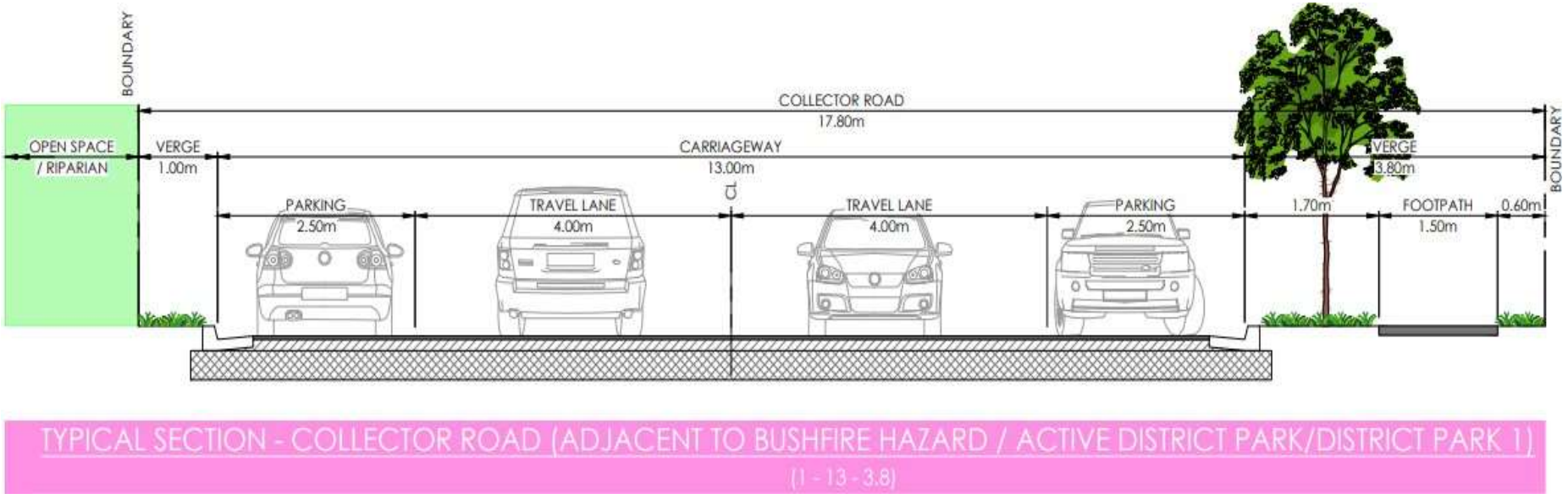


Figure E7.72 Collector Road (Adjacent to Bushfire Hazard / District Park 2 / Linear Parks

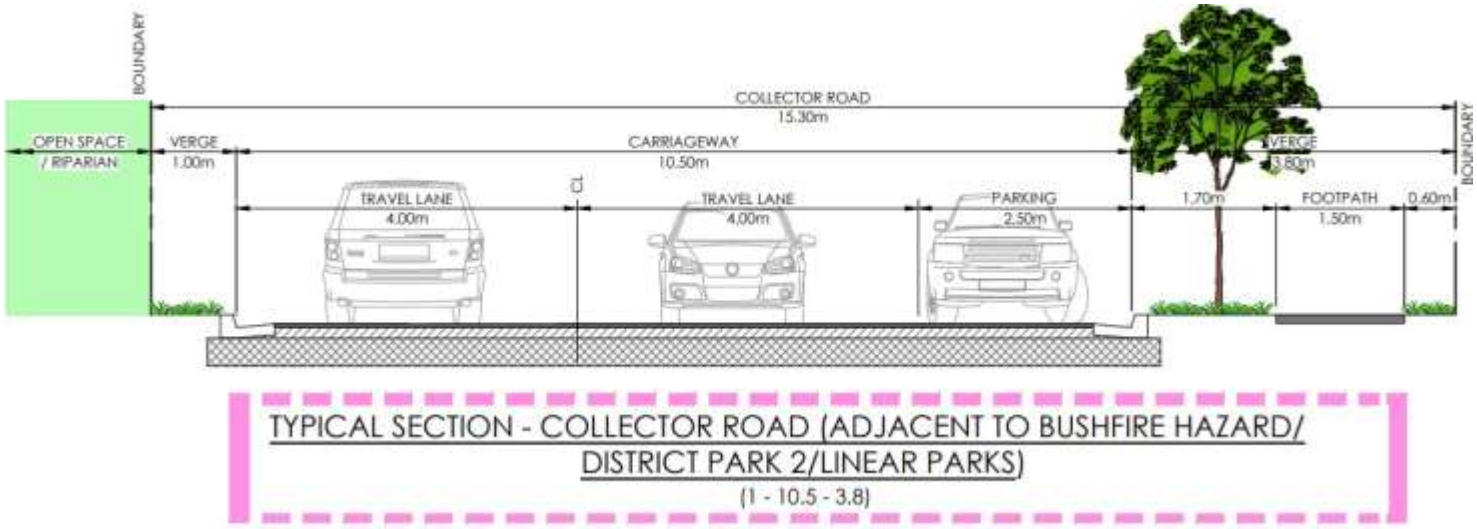


Figure E7.73 Collector Road – Glenmore Park Stage 2 boundary (See also Figure E7.27)

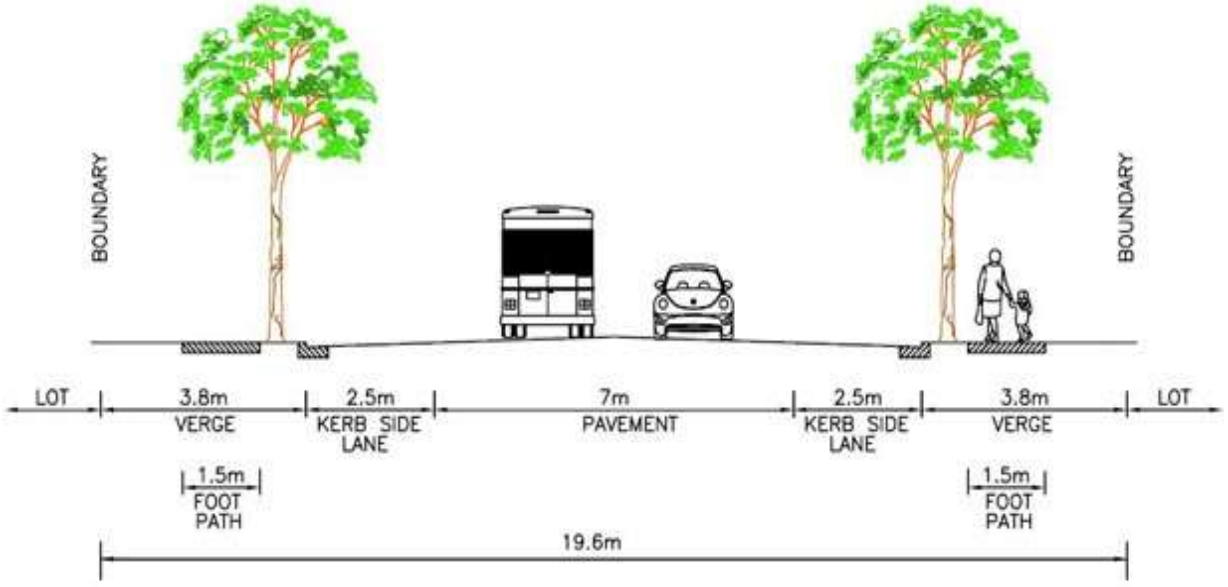


Figure E7.74 Minor Local Road

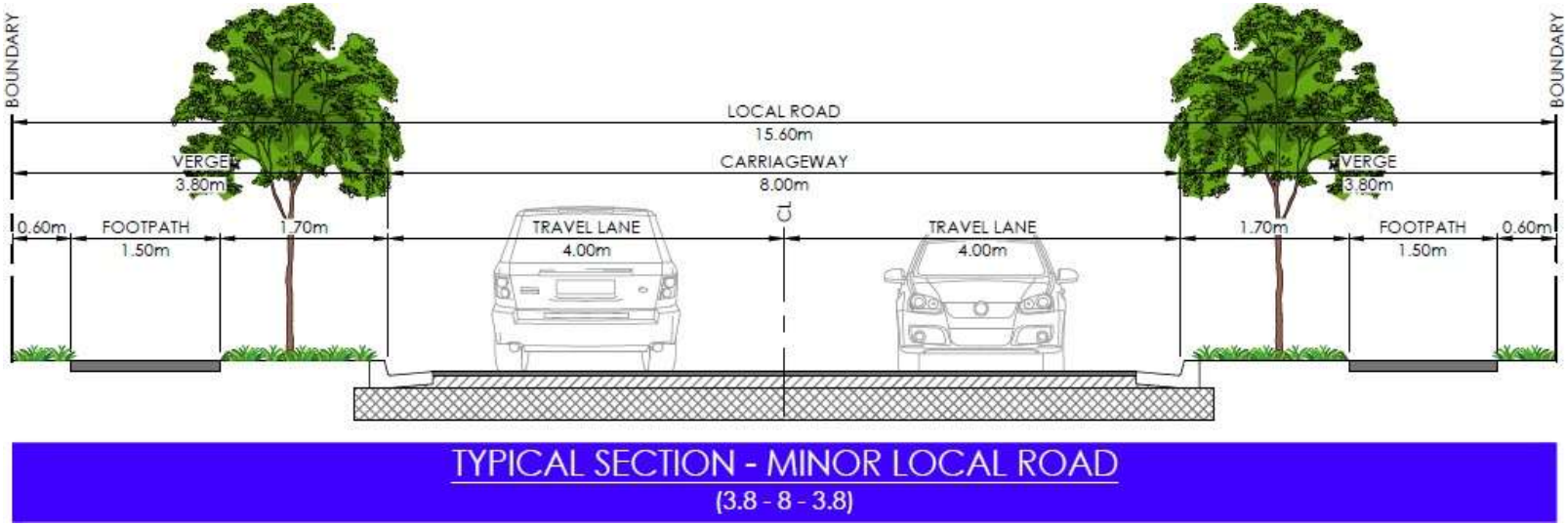


Figure E7.75Minor Local Perimeter Road (Adjacent to Bushfire Hazard) Option A

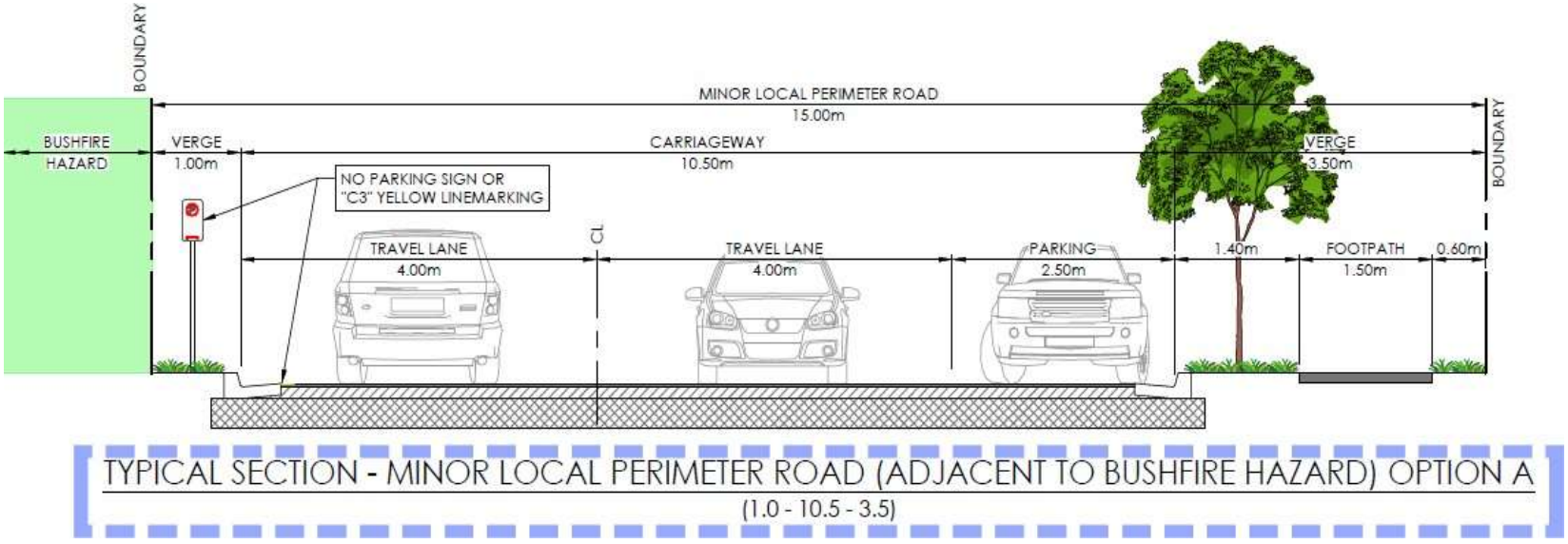


Figure E7.76Minor Local Perimeter Road (Adjacent to Bushfire Hazard) Option B

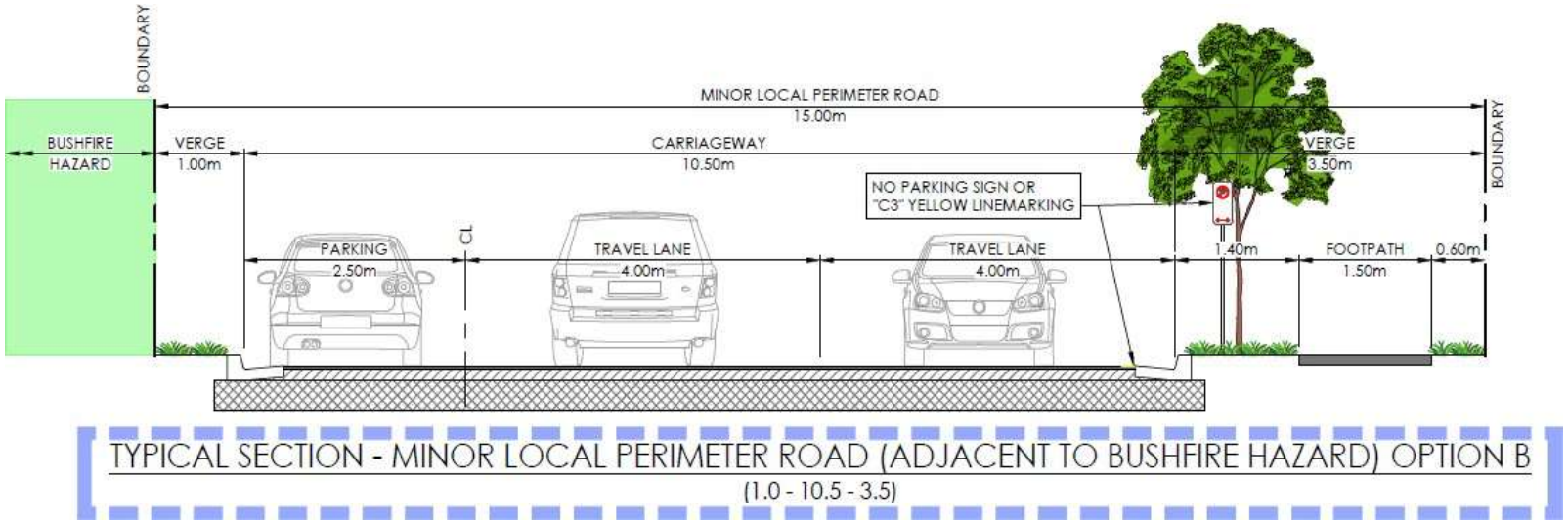


Figure E7.77Minor Local Perimeter Road (Adjacent to Bushfire Hazard / District Park 1 & 2)

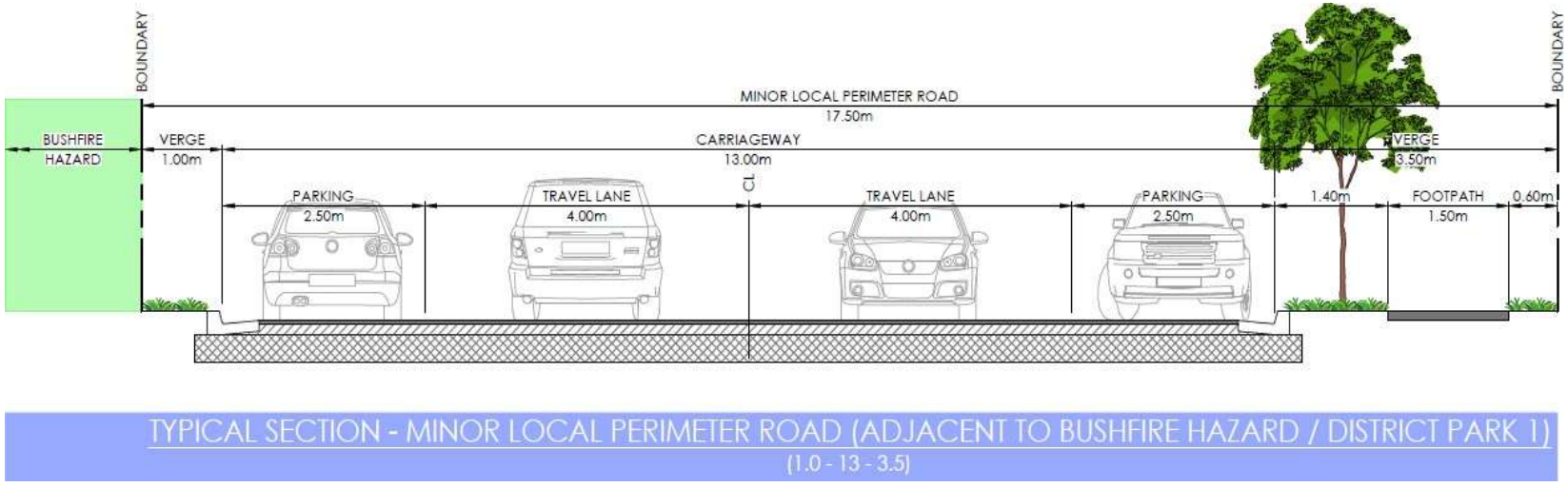
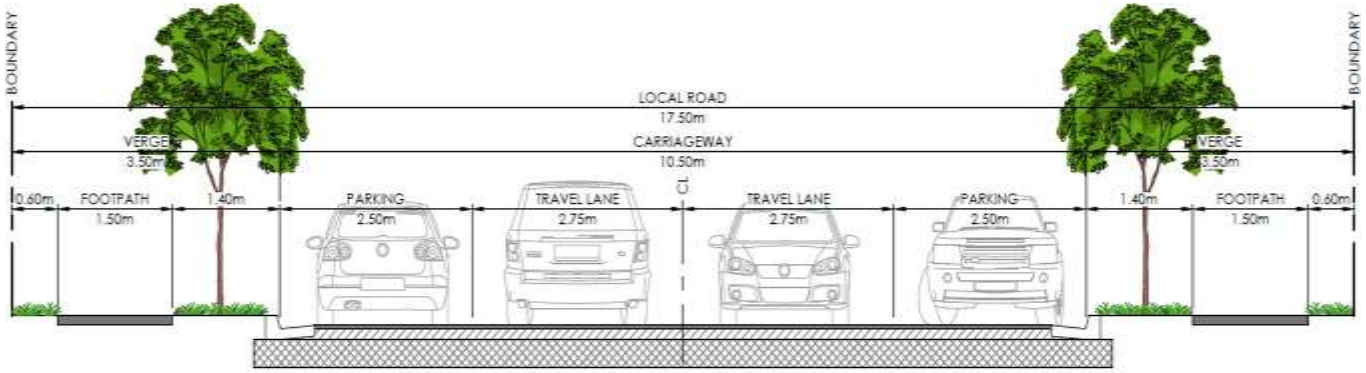


Figure E7.78Minor Local Road (Bushfire Hazard Non-Perimeter Road)

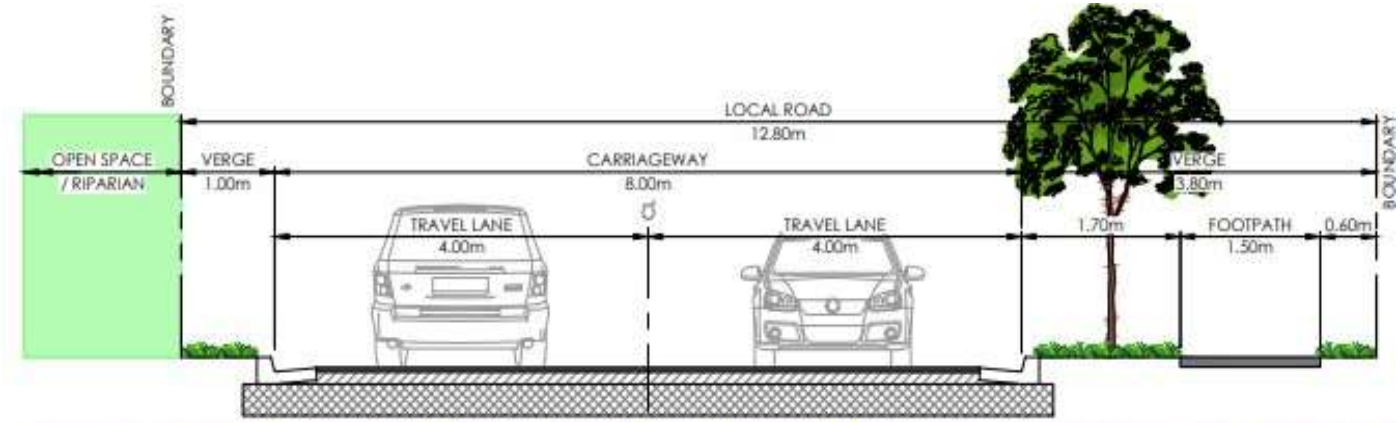


TYPICAL SECTION - MINOR LOCAL ROAD (BUSHFIRE HAZARD NON-PERIMETER ROAD)
(3.5 - 10.5 - 3.5)

NOTE:

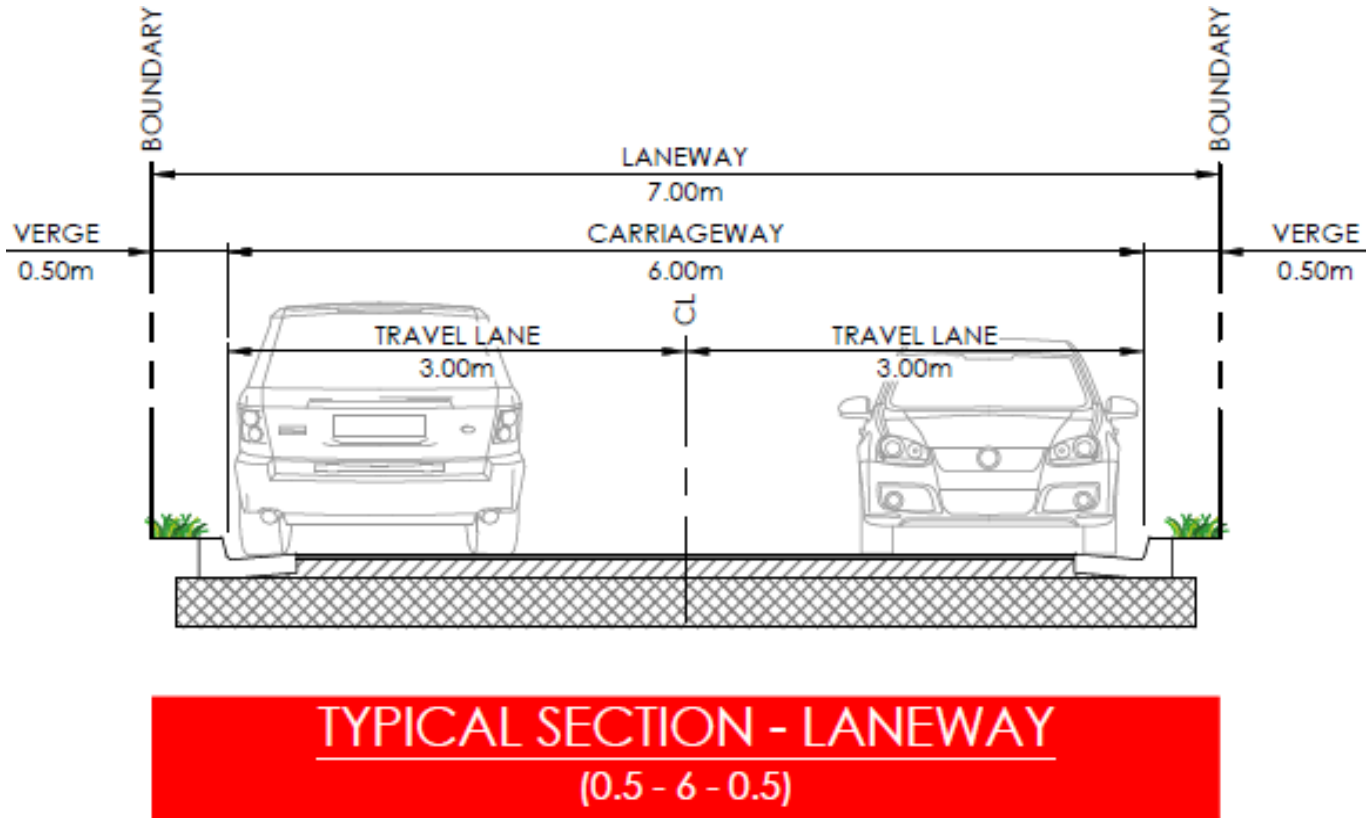
LOCAL ROADS IDENTIFIED BY NSW RFS AS 'NON PERIMETER' ROADS MUST MEET RFS CLEAR CARRIAGEWAY REQUIREMENTS. A PERFORMANCE SOLUTION MAY BE CONSIDERED BY COUNCIL WITH THE CONCURRENCE OF NSW RFS.

Figure E7.79 Minor Local Road (Adjacent to Local Park/ District Park 3)



TYPICAL SECTION - MINOR LOCAL ROAD (ADJACENT TO LOCAL PARK/DISTRICT PARK 3)
(1.0 - 8 - 3.8)

Figure E7.80 Laneways



Specific provisions and details are provided for the following roads:

1. **Special Purpose Roads**
   Entry Boulevard – The Northern Road
   Entry Boulevard – Chain O Ponds Road

A. Objectives

a) To provide a high-quality landscape, pedestrian and road connections at the entry to the release area.

B. Performance Measures

a) To provide a landscaped boulevard that creates an entry statement. The Entry Boulevard connects directly to district open space areas or local centre within the development and the collector road network.

C. Development Controls

a) Boulevard Roads are constructed generally in accordance with Figures E7.64 and E7.65

b) Widening of road may be required where topographical or road curve circumstances dictate.

c) Parking is required to be provided outside the minimum carriageway width of 8m for perimeter roads and 5.5m for non-perimeter roads in accordance with Section 5.3.2 of *Planning for Bush Fire Protection 2019.*

2. Special Purpose Roads – The Northern Road Interface

A. Objectives

a) To detail a perimeter road that incorporates a dense landscape buffer to the adjoining The Northern Road

B. Performance Measures

a) Streets adjacent to The Northern Road provide an interface with earthworks and landscaping to create a substantial screen to control views from and to The Northern Road.

C. Development Controls

a) The roads running adjacent to The Northern Road are to include a landscape zone parallel to the road reserve, to the boundary immediately adjacent to The Northern Road, as shown in Figure E7.66 and designed to suit the local interfacing level of The Northern Road.

3. Special Purpose Roads - Chain-O-Ponds Road Interface

A. Objectives

a) To provide a road that transitions to the adjoining rural area.

b) To provide a high degree of connectivity within the development area and to adjoining areas for pedestrian, cyclist and bus users to reduce reliance on private vehicles.

B. Performance Measures

a) Chain-O-Ponds Road is part of the collector road system and is to be re-constructed along the site frontage to provide a rural character with appropriate carriageway, kerb profile, road verge, fencing and street tree planting.

C. Development Controls

a) Chain-O-Ponds Road from the eastern Entry Boulevard to the western extent of the development is to be constructed to provide a rural character as shown in Figure E7.67 and E7.68.

b) The kerb line is to be constructed in consultation with Council's engineers.

4. Collector Roads

A. Performance Measures

a) Provide a high level of accessibility for all road users throughout the development, including vehicles, bicycles and pedestrians.

b) Exhibit an urban landscape character.

c) Provide clear lane widths able to handle local bus services on bus routes.

d) Are of a scale consistent with the higher order role these roads will play in the overall movement network of the development.

e) Integrate footpaths and shared ways and establish pedestrian amenity that reflects the linking role these streets will play in the urban fabric.

f) Be designed to provide safe pedestrian crossing points and lighting in accordance with the relevant Australian Standard.

g) Are able to comfortably accommodate the co-location of bus shelters.

B. Development Controls

a) Collector roads are constructed generally in accordance with Figures E7.69, E7.70, E7.71, E7.72, E7.73 and E7.63.

b) Widening of road may be required where topographical or road curve circumstances dictate.

c) Roads adjacent to land with a bushfire hazard are designed to provide fire truck access adjacent to land that may present a bushfire hazard.

d) Roads adjacent to the Environmental Corridors and Mulgoa Nature Reserve are to have a carriageway of 8m clear travel width to meet the Planning for Bushfire Protection 2019.

e) Parking is required to be provided outside the minimum carriageway width of 8m for perimeter roads and 5.5m for non-perimeter roads in accordance with Section 5.3.2 of *Planning for Bush Fire Protection 2019.*

6. Minor Local Roads

A. Performance Measures

a) Provide limited vehicle access for through traffic looking to access or exit the local road network.

b) Regular, minor delays or the need for driver co-operation due to vehicles parking on local roads are acceptable, as a traffic calming outcome.

c) Maintaining high levels of permeability for non-vehicle road users.

d) Roads are designed to ensure a low-speed traffic environment.

e) Informal on street parking constrains traffic movement.

B. Development Controls

a) Streets are constructed generally in accordance with the dimensions identified at Figure E7.74, E7.75, E7.76, E7.77, E7.78, E7.79 and E7.63.

b) Widening of road may be required where topographical or road curve circumstances dictate.

c) Roads adjacent to land with a bushfire hazard are designed to provide fire truck access adjacent to land that may present a bushfire hazard.

d) Roads adjacent to the Environmental Corridors and Mulgoa Nature Reserve are to have a carriageway of 8m clear travel width to meet the Planning for Bushfire Protection 2019.

e) Parking is required to be provided outside the minimum carriageway width of 8m for perimeter roads and 5.5m for non-perimeter roads in accordance with Section 5.3.2 of *Planning for Bush Fire Protection 2019.*

7. Lane Ways

A. Performance Measures

a) Lanes are shared zones allowing vehicular traffic for access to rear loaded garages only.

b) Laneways will be designed to incorporate a change in materials and/or kerb cuts to provide differentiation to other vehicular streets.

c) No parking is permitted in Lane Ways.

d) Designed with a central invert for drainage where topography allows.

e) Studio units built above or adjacent to garages will be encouraged to provide passive surveillance.

f) Laneways provide distinctive plantings at lane entry areas and at regular locations, where practical, to improve amenity.

B. Development Controls

a) Streets are constructed generally in accordance with the dimensions identified at Figure E7.80.

b) Widening of road may be required where topographical or road curve circumstances dictate.

c) The road design seeks to provide a maximum speed of 15 km/h.

7.5.3.4 Open Spaces

A. Objectives

a) The open space network will contribute to the overall character of the development connecting it to place.

b) Access and views to nature within and beyond the site will enhance the quality of the urban environment.

c) To provide high amenity areas for adjacent residential development.

d) To create parks that provide a wide variety of public amenities supporting passive, informal and formal active uses.

e) To conserve natural features and vegetation on land identified for open spaces and environmental corridors.

f) Planting within open spaces to balance open areas for recreation with significant planting and provision of extensive tree canopy.

g) To provide high amenity areas for adjacent residential development.

B. Performance Measures

These objectives may be achieved where:

a) Active transport links within environmental corridors are to link with cycleways in the street network as shown in Figure E7.81and E7.61.

b) Open spaces are to be bordered by streets unless adjacent to environmental corridors, the school site, or The Northern Road. Buildings on the adjoining streets provide passive surveillance of the park or sports field areas.

c) Car parking for the sports fields can be provided both as a dedicated parking area and parking bays within the streets around the park.

d) Existing native vegetation is to be avoided, retained, protected and enhanced within parks wherever practical.

e) Planting within open spaces to balance open areas for recreation with significant planting and provision of extensive tree canopy.

f) Planting species to be appropriate for the area and include largely low mass planting and canopy trees with clear trunks to maintain passive surveillance of open space areas.

g) The delivery of tree canopy within open space areas, and linear parks should aim to align with the tree canopy targets provided in the Public Domain and Open Space Strategy where possible. These tree canopy targets are provided in the table below.

   Tree canopy targets in the table are percentages that should be considered in the design of open space areas and environmental corridors (Linear Parks).

h) Delivery of tree canopy in active open space parks should not impede the function of these recreation areas and activities.

Open Space Network	Tree Canopy target
Linear Park 1	76%
Linear Park 2	74%
Linear Park 3	43%
District Park 1	46%
District Park 2	75%
District Park 3 – active	24%
District Park 4 - active	29%
Local Park 1	50%
Local Park 2	58%
Local Park 3	47%

i) The open space network and reference to specific open space areas is shown in Figure E7.81.

Figure E7.81: Indicative Open Space Concept Plan

7.5.3.4.1 Open Spaces – District Parks

A. Objectives

a) To provide for the active and passive recreational needs of the local community.

b) To provide multipurpose sporting and recreational activities that reflects seasonal demands.

c) To provide a central neighbourhood place for community activities and gatherings.

d) To provide the focus of interconnected high amenity landscaped environment.

e) To encourage an active lifestyle for residents.

B. Performance Measures

a) Open space areas are provided in accordance with the Figure E7.81 and generally in accordance with the *Public Domain and Open Space Strategy*. These areas shall contain facilities and infrastructure to support various activities and sporting events, including amenities for spectators and participants.

b) The open space provides a diverse range of active and sporting facilities.

c) Active playing areas are provided with facilities and infrastructure to support various sporting events, including amenities for spectators.

d) Active playing areas are differentiated as separate places by plantings, paths and other landscape elements.

e) Pathways provide:

   i. connection between the site and the broader pedestrian and bicycle network.

   ii. spectator access to and around the playing fields.

   iii. connection to the Neighbourhood Centre and Primary School.

f) Adjacent buildings provide passive surveillance of the park area.

g) No back fences of development are to face public open space.

h) Parking is provided as a central parking lot for District Park 3 and 4 and parking bays are provided on the streets around all parks.

i) Large trees are provided around the perimeter of the park to enclose the space.

j) The park is provided with an open and low fence or bollard type barrier along its perimeter.

k) District Parks can incorporate on-site water quality treatment and storage devices as part of their development.

C. Development Controls

Open space and embellishment of land for recreation will generally be in accordance with the *Public Domain and Open Space Strategy* including the types of facilities outlined below:

a) **District Park D3** shown on the Open Space Concept Plan (Figure E7.81) should provide:

i. Sports field/s capable of being combined for rugby league and cricket use.

ii. Courts /practice nets

iii. Sports field lighting.

iv. Safe and functional spectator seating and standing areas.

v. Irrigation system for the playing field/s.

vi. A centrally located amenities complex containing team and referee change rooms, public toilet facilities, canteen facilities, storage spaces and covered outdoor gathering spaces.

vii. Parking for up to 102 cars (including adequate accessible parking) and associated movement with additional parking provided by bays within surrounding streets. Shared parking with the school may be considered to maximise use and reduce pavement area for urban heat island effect.

viii. Multi-ability playground and shade structures

ix. Picnic facilities including shelter, tables, seating and electric BBQs.

x. Connected pedestrian and cycle path network.

xi. Landscaping including lawn areas, mass planting and canopy tree species.

xii. Detention tanks for water irrigation.

b) **District Park D4** shown on the Open Space Concept Plan (Figure E7.81) will provide:

i. A circular oval playing field for organised sport and function as a community 'Village Green'

ii. Two active sport fields

iii. Safe and functional spectator seating and standing areas.

iv. Purpose built amenities building that meets Council's specifications for amenities buildings, to service D4.

v. Sealed and line-marked parking areas to cater for a minimum of 120 spaces (including adequate accessible parking) and associated movement with additional parking provided by bays within surrounding streets.

vi. Multi-ability playground and shade structures

vii. Picnic facilities including shelter, tables, seating and electric BBQs.

viii. Informal kick around/recreational lawn spaces

ix. A dedicated community facility.

x. Connected pedestrian and cycle path network.

xi. Landscaping including lawn areas, mass planting and canopy tree species.

xii. Detention tanks for water irrigation

xiii. Seating and shade opportunities are provided within the parks.

c) **District Park D1** shown on the Open Space Concept Plan (Figure E7.81) should provide:

i. Feature water body including water quality treatment devices with wetland areas and raingardens.

ii. Viewing platform

iii. Picnic facilities including shelter, tables, seating and electric BBQs.

iv. Nature themed playground and shade structures

v. Retained existing native vegetation where practicable and embellished with extended endemic vegetation.

vi. Informal recreational lawn spaces

vii. Connected pedestrian and cycle path network including nature trails

viii. Landscaping (rehabilitation and embellishment) including mass planting areas and significant canopy trees.

ix. Car parking to perimeter streets.

d) **District Park D2** shown on the Open Space Concept Plan (Figure E7.81) should provide:

i. Picnic facilities including shelter, tables, seating and electric BBQs.

ii. Nature themed playground and shade structures

iii. Retained native vegetation, where practicable, and embellished with extended endemic vegetation.

iv. Informal kick around/recreational lawn spaces

v. Connected pedestrian and cycle path network including nature trails.

vi. Landscaping (rehabilitation and embellishment) including mass planting areas and significant canopy trees.

vii. Car parking bays within surrounding streets.

viii. Seating and shade opportunities are provided within the parks.

7.5.3.4.2 Open Spaces - Local (Neighbourhood) Parks

A. Objectives

a) To create a variety of public spaces that provides both passive and informal active open spaces.

b) To conserve natural features of the site.

c) To provide high amenity areas for adjacent residential development.

d) To facilitate cultural identity through art and design in public places, with the engagement of the local community.

B. Performance Measures

These objectives may be achieved where:

a) Each park is provided with has its own distinctive landscape character.

b) Existing vegetation is retained and enhanced by additional complementary plantings.

c) Parks create a precinct focus for the surrounding neighbourhood.

d) Parks are generally bounded by streets with buildings oriented towards the open space providing outlook and passive surveillance.

e) There are no back fences of development facing public open space.

f) The parks provide linkages between the broader pedestrian and bicycle networks.

g) Playground facilities are provided within the parks.

h) Seating and shade opportunities are provided within the parks.

i) The indicative location of neighbourhood parks is shown on Figure E7.81.

j) Public art is provided throughout key public domain areas.

C. Development Controls

1) **Local Parks L1, L2, & L3** shown on the Open Space Concept Plan (Figure E7.81) should provide amenities generally in accordance with the following table:

	L1	L2	L3
Playground and shade structure	Yes		
Picnic Facilities (shelter, tables, seating)	Yes		
Landscaping (rehabilitation & complementary embellishment)	Yes		
Kick around / recreational lawn space	Yes		
Shared and connected paths as part of the overall network.	Yes		
Parking (on street on surrounding roads)	Yes		

7.5.3.4.3 Linear (Riparian Corridor Edge) Parks

A. Objectives

a) To provide an integrated network of open spaces.

b) To enhance the character of major drainage routes through revegetation of those corridors.

c) To provide high amenity areas for adjacent residential development.

d) To link and extend the access and movement network for bicycles and pedestrians.

e) To encourage an active lifestyle for residents by providing recreational and educational opportunities.

B. Performance Measures

These objectives may be achieved where:

a) Recreational and educational opportunities dominate over the stormwater function of this location.

b) A perimeter pathway is provided along the edges of the corridors.

c) The pathway meanders through a diversity of landscaping settings that provide shade opportunities for users.

d) The park is generally bounded by streets with buildings oriented towards the open space providing outlook and passive surveillance.

e) There are no back fences of development facing the public open space.

f) The park is provided with an open and low perimeter fence or bollard type barrier along the entire edge.

g) Facilities including seating, outdoor fitness equipment and interpretive signage are provided along the edge.

h) Parking opportunities are provided within the road reserve and co-located with recreational facilities.

i) Riparian corridor parks can be co-located with active open spaces and neighbourhood parks.

C. Development Controls

a) The minimum width for shared and dedicated paths in open space network is 2.5m.

7.5.3.5 Neighbourhood Precinct

A. Vision

The proposed Neighbourhood Centre will provide a well-connected heart to the development which will foster a strong sense of community with this role being strengthened by its co-location with the school and active open space facilities forming a wider community hub including day care, retail, community facilities, and playground.

As a key community focal point the Neighbourhood Centre is linked into the network of active green corridors along which residents will be able to connect between the community hub, the Mulgoa Nature Reserve and their homes. Reinforcing the character of the place with the of integration with the natural environment, the Centre will create an active frontage to the adjacent green spine. Along this frontage the green will be brought into the Centre through a permeable public domain interface offering additional amenity through passive recreational uses within the spine to further enhance public amenity.

A. Objectives

a) To create a memorable experience for the local community.

b) To provide a highly accessible community focal and gathering point

c) To ensure that a safe public domain represents a defining element of the centre.

d) To accommodate a diverse mix of land uses including residential.

e) To ensure that adequate land is reserved for the provision of a future School.

f) To ensure the scale of retail facilities sits comfortably within the local and regional retail hierarchy.

g) To ensure the retail centre, potential school site and sports field are connected and provide a cohesive destination for the local community.

h) To avoid duplication of parking provision by co-locating key public land uses.

i) To facilitate and encourage walking, cycling and public transport access as well as car access to public facilities.

j) To create a local retail which offers local amenity, contributes positively to the surrounding public domain and provides the opportunity for shop top housing to enhance housing diversity.

k) A highly permeable precinct that is easily accessible by pedestrian cyclists and motor vehicles but promote pedestrian activity.

l) Locate the precinct adjacent to the environmental corridor to maximise amenity and pedestrian accessibility.

m) The Precinct creates a sense of arrival and community identity.

n) The precinct includes public meeting and gathering spaces, squares or promenades that allow for community events such as markets and festivals.

o) Provides mixed use activity that activates that precinct during day and evening periods.

p) The layout facilitates shared use of all spaces including parking by various users.

7.5.3.5.1 Urban Structure

A. Performance Measures

a) The Neighbourhood Precinct is located at the heart of the community within a 10-minute walk for most of that community.

b) A high-quality public domain area is provided as part of a central organising element of the centre.

c) The centre is co-located with other high use public places including active open space and the primary school.

d) The retail area is located on the loop collector road.

e) Accessible and legible linkages are provided between other key community components such as recreation areas and schools.

f) The Precinct accommodates multi-mode transport ensuring excellent pedestrian and cycle links.

g) Public transport is accommodated within the centre of the retailing precinct.

h) The precinct shall provide both open-lot car parking and street based parking for convenience.

i) Various land uses co-located in the Neighbourhood Precinct make efficient use of the total car parking spaces available.

j) People are able to park their car in one location and engage in a variety of activities in close proximity to that space and within a safe pedestrian environment.

k) Retail facilities are delivered as required by demand analysis.

l) Figure E7.82 provides an indicative structure and layout Image for the Neighbourhood Precinct.

Figure E7.82 Neighbourhood Precinct Structure

7.5.3.5.2 Urban Character

A. Performance Measures

a) The Precinct creates a sense of arrival and community identity.

b) The Precinct is integrated into the overall release area landscape structure, emphasizing the hierarchy of the precinct in the overall urban structure.

c) A walkable pedestrian friendly environment is to be established with leafy active wide footpaths and pedestrian links that connect activities and gathering spaces.

d) The precinct includes public meeting places, squares or promenades to create varied, comfortable, and accessible environments that provide a focus and destination for community activity.

e) Car parks are to be leafy plazas that provide opportunities for other uses (i.e. markets or public gathering) with clear defined pedestrian links.

f) Where medium to large scale uses are planned, finer grained uses should be incorporated to minimise the impact of bulk and scale to the main thoroughfares of pedestrian movement.

g) Opportunities for residential development are carefully planned within and adjacent to the Precinct Centre providing for passive security and surveillance.

h) Appropriate dwelling forms encourage growth of the Precinct in time, both in terms of extended active hours and adaptive uses that allow for home based incubator businesses to emerge.

i) The building form creates a series of spaces that provide shade in summer, sun in winter and are sheltered from unpleasant prevailing winds.

j) Buildings define the street and provide a relatively continuous street frontage.

k) Public art is incorporated at key focal points to promote community identity.

l) Key street intersections and transport interchanges are provided with distinctive paving and threshold type landscape treatments.

7.5.3.5.3 Retail Built Forms

A. Performance Measures

a) Maximise the percentage of active shopfront to public streets.

b) Buildings are built primarily to the street edge.

c) Glazed shop fronts are provided at the interface with the street.

d) Wide awnings or verandahs are provided to the main street to provide pedestrian amenity.

e) Shop fronts and awnings return around corners.

f) Building design reflects a human and village scale.

g) Buildings provide an appropriate environmental response to encourage pedestrian activity, seating and gathering spaces and contributing to safety and security.

h) Two storey scale forms are provided at key road intersections within the centre.

i) Entry areas to internalised retail areas are well defined and highly legible.

j) The impact of deliveries should be minimised through location and separation of those activities.

k) Predominantly light reflective roofs to be used.

B. Development Controls

a) Any supermarket facility has an ‘open’ exterior.

b) Incorporate the principles of Crime Prevention Through Environmental Design (CPTED) in the design of the Local Centre.

c) Incorporate landscape into all external areas and minimize hard surfaces.

d) Provide sufficient canopy cover and shade to external areas including tree planting at one tree per 6 bays within car parking areas.

7.5.3.5.4 Primary School

A. Performance Measures

a) The school is located adjacent to public playing fields and closely linked by a pedestrian safe route to this and the local shops.

b) The school is located adjacent to the public playing fields to facilitate shared use of these facilities including parking areas.

c) The school is located in close proximity to a public bus route.

d) The built form of the school engages and activates the street edge to contribute to the pedestrian character and mutually benefit from passive surveillance.

e) Suitable space should be provided for the short-term pick-up and drop-of students that avoid the need for continuous circulating traffic.

f) Suitable space for bus parking shall be provided.

g) Use of predominantly light reflective roofs

h) Provide landscaping and tree canopy cover to enhance amenity, including in car parking areas.

i) School to be designed to maximise passive design principles to reduce energy use.

B. Development Controls

a) Detailed design and planning of the school shall be subject to a separate development application process through Schools Infrastructure NSW with the design to comply with all relevant guidelines and policies.

7.5.4 Private Domain

7.5.4.1 Subdivision

A. Objectives

a) To provide block sizes that maximise access to solar orientation.

b) To provide a subdivision pattern that accommodates a range of dwelling densities and lot sizes.

c) To provide lot sizes and shape that reflect the broader urban structure.

d) To ensure development responds to site topography and natural assets.

e) To provide a range of densities, lot sizes and house types to foster a diverse community and interesting streetscapes.

B. Performance Measures

a) Blocks and lots are generally rectilinear.

b) Lots are oriented to facilitate siting of dwellings and private open space to take advantage of winter solar access and summer sun deflection.

c) Larger lot frontages provided on street corners to allow development to address both street frontages.

d) Subdivision design will respond to site topography by providing larger lots on sloping lands.

e) Lot sizes and dimensions take into account site topography and consider the need for earthworks and potential retaining wall construction.

f) Lots front streets and overlook open spaces to provide passive surveillance of those areas.

g) Benching of sites should preferably be undertaken at subdivision stage and earthworks plans should indicate positions of necessary retaining structures and associated drainage.

C. Development Controls

a) Single dwelling lots are generally a minimum of 25m deep.

b) Minimum lot widths for the R2 zone will be 10m. Minimum lot widths for the R3 zone will be 6m.

c) Retaining walls are to be constructed with appropriate materials. Use of timber is not permitted.

7.5.4.2 Dwelling Diversity

A. Objectives

a) To promote diverse housing forms that meet the increasingly diverse demands of the local community.

b) To ensure affordable and diverse housing strategies for the release area are achieved.

c) To enable diverse housing by varying lot sizes (and lot frontages) to facilitate different affordability price points and a varied streetscape.

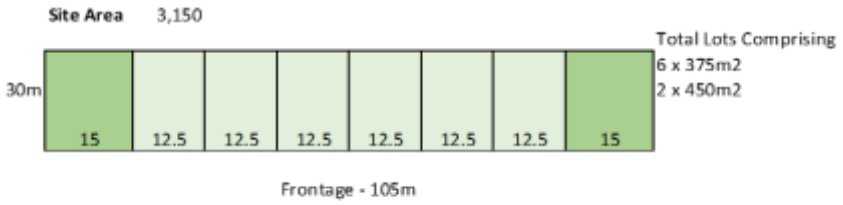
1. R2 Low Density Residential

B. Performance Measures

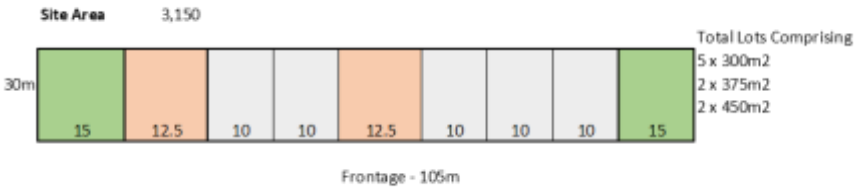
a) Subdivisions in the R2 Zone are to incorporate housing diversity by varying lot frontages where appropriate to do so. Figure E7.83 provides an example of how varying lot sizes can introduce different housing forms, diversity and streetscape interest and should be used to guide subdivisions in the R2 zone.

Figure E7:83 Examples of variations to lot size in a street block – R2 zone

Approach for traditional subdivision (lack of lot diversity)



Approach to increase housing diversity:



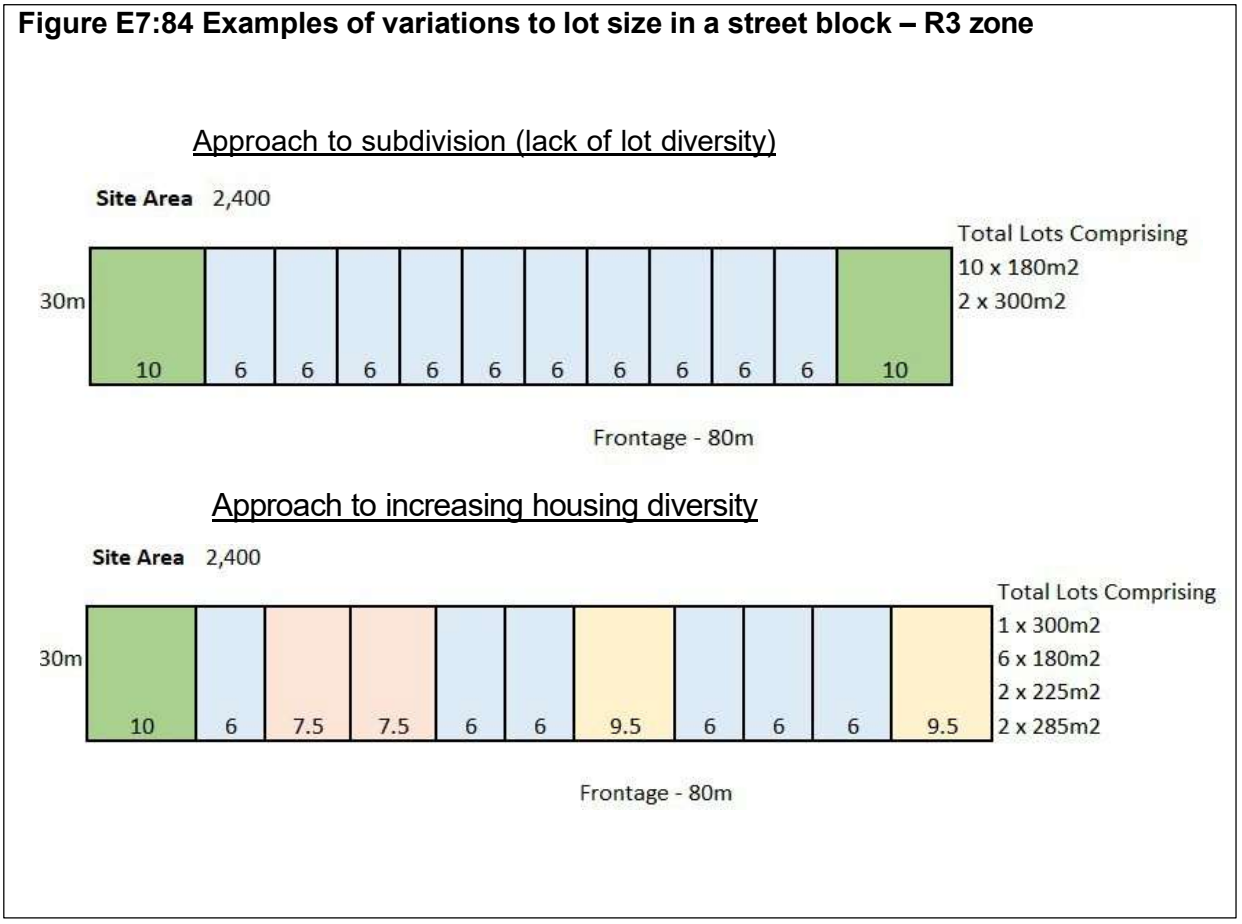
Diverse Streetscape

2. R3 Medium Density Residential

A. Performance Measures

a) Subdivisions in the R3 Zone are to incorporate housing diversity by varying lot frontages where appropriate to do so. Figure E7.84 provides an example of how varying lot sizes can introduce different housing forms, diversity and streetscape interest and should be used to guide subdivisions in the R3 zone.

Figure E7:84 Examples of variations to lot size in a street block – R3 zone

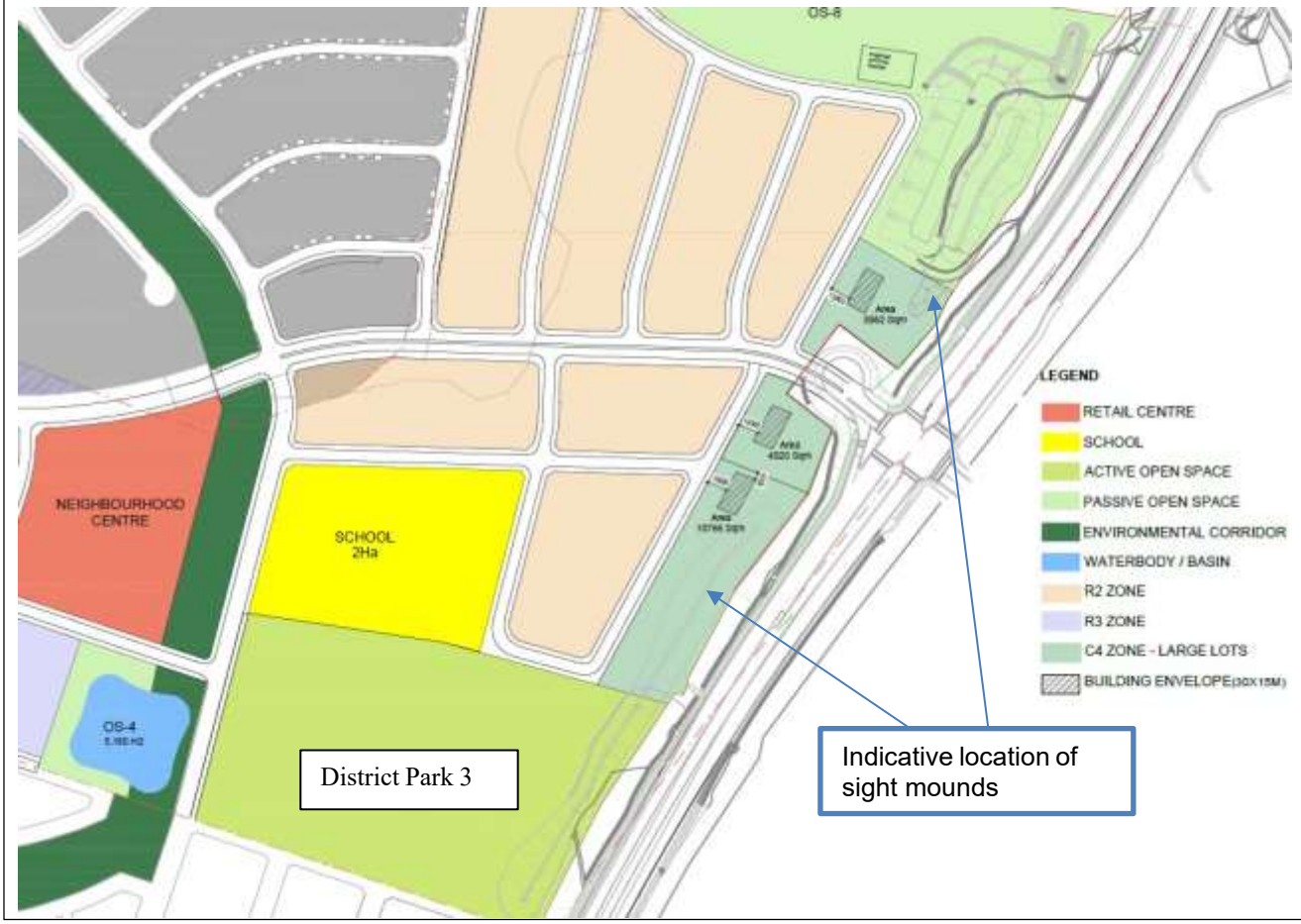


3. C4 Environmental Living

A. Performance Measures

a) As part of any subdivision of lots along The Northern Road which have a sight mound as identified in Figure E7.85.1, the 88B instrument for these lots is to include an easement that:
   i. Prevents the sight mound from being developed or altered in any form without development consent approval from Council, and
   ii. Requires the landowner to be responsible for the maintenance and ongoing management of the sight mound.

Figure E7.85.1 C4 zoned large lots north of District Park 3 and the indicative location of the sight mounds



7.5.4.3 Shared Driveways

A. Objectives

a) To make efficient use of urban land.

b) To create high quality streetscapes.

c) To minimise conflict between pedestrians and vehicles.

B. Performance Measures

a) Shared driveways are formalised through the creation of right of carriageways as part of the subdivision.

b) Provide safe and convenient access to rear garages.

c) Shared driveways are a low maintenance environment.

d) Shared driveways are used solely by residents with garages accessed by the private driveways.

e) Shared driveways are the smallest configuration possible to serve the required rear garages.

f) At the street entry, the driveway is narrow and landscaped to have low visual impact at the street entry and be clearly distinguishable as private access only.

g) A studio may be provided at the end of the longest driveway axis and provides windows that overlook the shared driveway.

h) Adjacent dwellings provide additional passive surveillance opportunities over the driveway.

i) Pedestrian gates are provided from the driveway to adjoining rear yard areas.

j) Subdivision provides an appropriate arrangement for the long-term maintenance and management for the driveway.

C. Development Controls

a) Will serve a maximum of 6 dwellings.

b) Are generally configured as one of four general types depending on block geometry and garages to be accessed as per Figure E7.86.

c) Are generally 3m wide and allow for exiting in a forward direction.

d) If connected to a street that will carry more than 300 vehicles per day, the shared driveway shall have a width of 5.5m for a distance of 6m from the kerb line.

e) All private driveways shall achieve the design standards as identified per Figure E7.87.

f) A minimum of one garage fronting the Shared Driveway provides a studio above the garage.

Figure E7.86: Shared Driveways Access Options

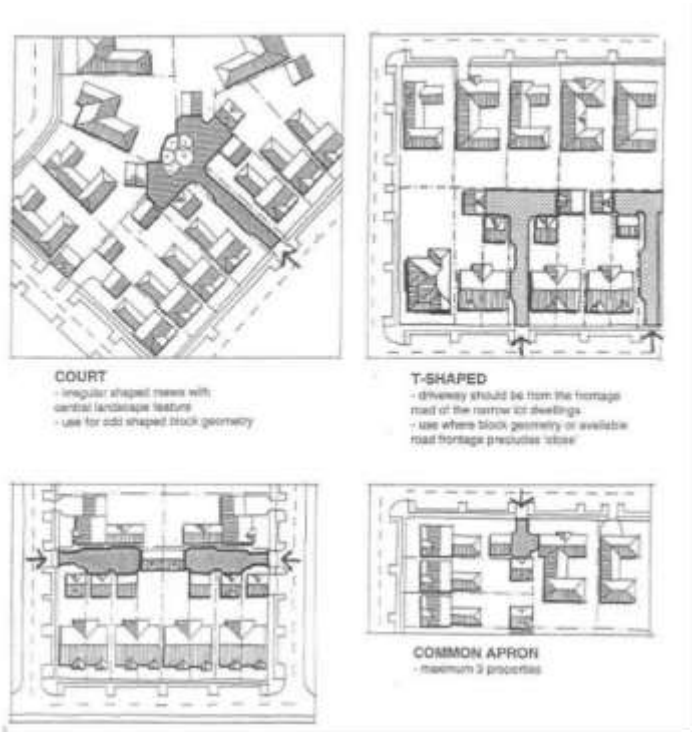
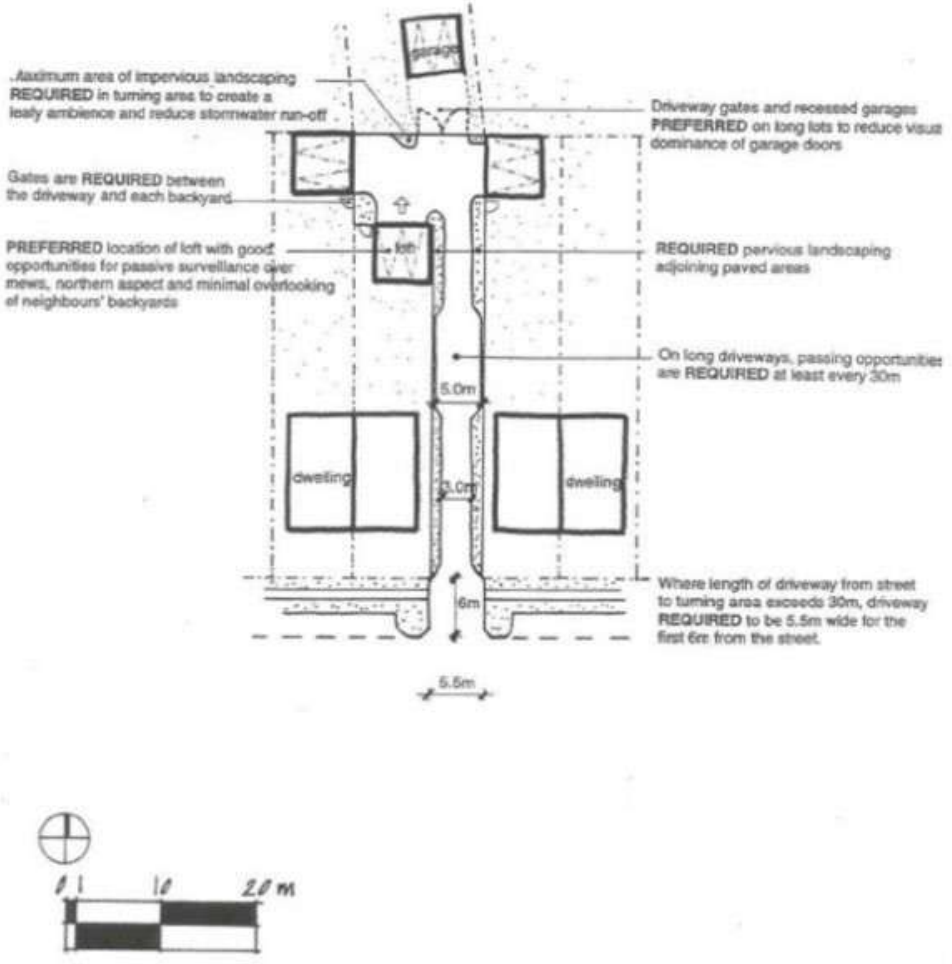


Figure E7.87: Shared Driveway - Design Principles



7.5.4.4 Site Planning

7.5.4.4.1 Principal Private Open Space

A. Objectives

a) To provide a high level of residential amenity with opportunities for outdoor living within the property.

b) To enhance the spatial quality, outlook, and usability of private open space.

c) To optimise solar access to the living areas and private open spaces of the dwelling.

B. Performance Measures

a) Principal private open spaces are the primary organising element of site planning and dwelling design.

b) Private open spaces should be located at ground level in rear yard areas that maximise opportunities to obtain solar access for all dwelling types other than apartments.

c) Development with a northern orientation have the opportunity to provide secondary private open spaces area at the street frontages through the use of courtyards and balconies.

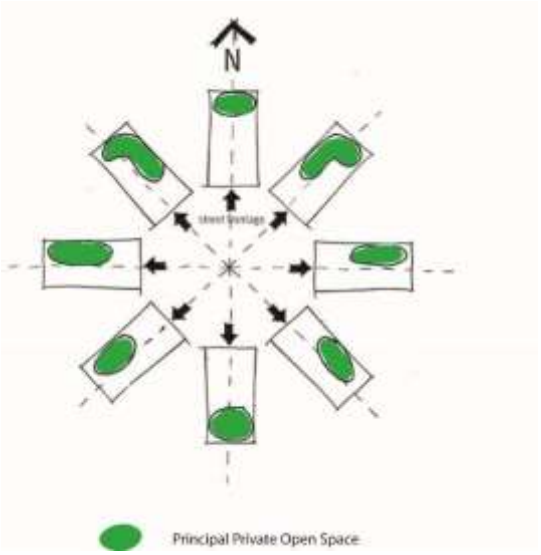
d) The principal private open spaces should have a direct interface with primary internal living area of its dwelling.

e) Development should aim to achieve the preferred location for open space location as demonstrated at Figure E7.88.

C. Development Control

a) Dwellings will achieve the minimum standards for Principal Private Open Space as identified at Section 7.5.5 of this section.

Figure E7.88: Private Open Space Siting



7.5.4.4.2 Garages and Parking

A. Objectives

a) To provide sufficient and convenient parking for residents and visitors.

b) To reduce the visual impact of garages, carports, and parking areas on the streetscape and improve dwelling presentation.

c) To promote safe public domain areas.

B. Performance Measures

a) The width of the lot will determine the maximum size of garage provided in either street frontage or rear lane locations as demonstrated at Figure E7.88.

b) Front garages are to be setback behind the front most element of the house and integrated as part of the dwelling façade.

c) Garages are constructed in materials and colours, which blend the garage doors into the main building.

d) Garages provide flexible accommodation for vehicles, storage, and covered areas for outdoor recreation.

e) Stacked parking is an acceptable outcome provided it is accommodated entirely within the property.

f) Studios can be provided over garages to rear lanes to provide surveillance, work from home or residential accommodation opportunities.

g) Vehicle crossings between the street and front boundary shall be constructed in plain concrete only.

C. Development Controls

a) Double garages are the maximum garage size allowed for single dwelling houses on R2 and R3 zoned land.

b) Where a dwelling provides vehicular access to the street the garage will be setback a minimum of 5.5m from the front boundary.

c) Garages are to be provided per the Australian Standard, including:

   i. Minimum width of 3.0 for single garages.

   ii. Minimum width of 5.5m for double garages.

d) Garages are to be provided in accordance with the below:

	Lot Frontage
Rear Loaded (including double and single garage)	Lot width must be a minimum of 6m
Front Loaded Single Garage	Lot width must be a minimum of 6m (R3) and 10m (R2)
Front Loaded Double Garage	Lot width must be a minimum of 10m

7.5.4.4.3 Building Footprints

A. Objectives

a) To provide a variety of streetscapes that reflect the character of different precincts.

b) To create an attractive and cohesive streetscape within local precincts.

c) To maximise provision of solar access to dwellings.

d) To minimise the impacts of development on neighbouring properties in regard to view, privacy, and overshadowing.

e) To encourage the efficient and sustainable use of land.

f) To allow for landscaped rear yard areas.

g) To promote public safety of public domain areas.

h) To manage risk from bushfire events.

i) To ensure the provision and location of zero lot line lots and small lots respond to topography.

B. Performance Measures

1. Front Setbacks

a) Front setbacks are site responsive and will be determined for individual lots as part of the Subdivision Approval process given consideration to the following matters:

i. Future dwelling type.

ii. Orientation of lots.

iii. Provision of front yard open space and associated fencing.

iv. Availability of direct vehicle access to the street.

v. Relevant role of street in local road hierarchy.

vi. Proximity to open space areas.

vii. Location within Neighbourhood Centre.

viii. Requirements to provide Asset Protection Zone.

2. Rear Setbacks

a) Landscaping provision to allow tall trees in the rear yard area to provide a vegetated backdrop to the development.

C. Development Controls

1. Front Setbacks

a) Front setbacks are identified in Section 7.5.5 – Typical Development Forms, for each dwelling type.

2. Side Setbacks

a) The width of the lot will determine the ability of the site to provide zero lot lines as demonstrated at Figure E7.89.

b) Where only one side of a lot can provide a zero lot line, then Figure E7.88 will be used to determine which of those boundaries accommodates that zero lot line.

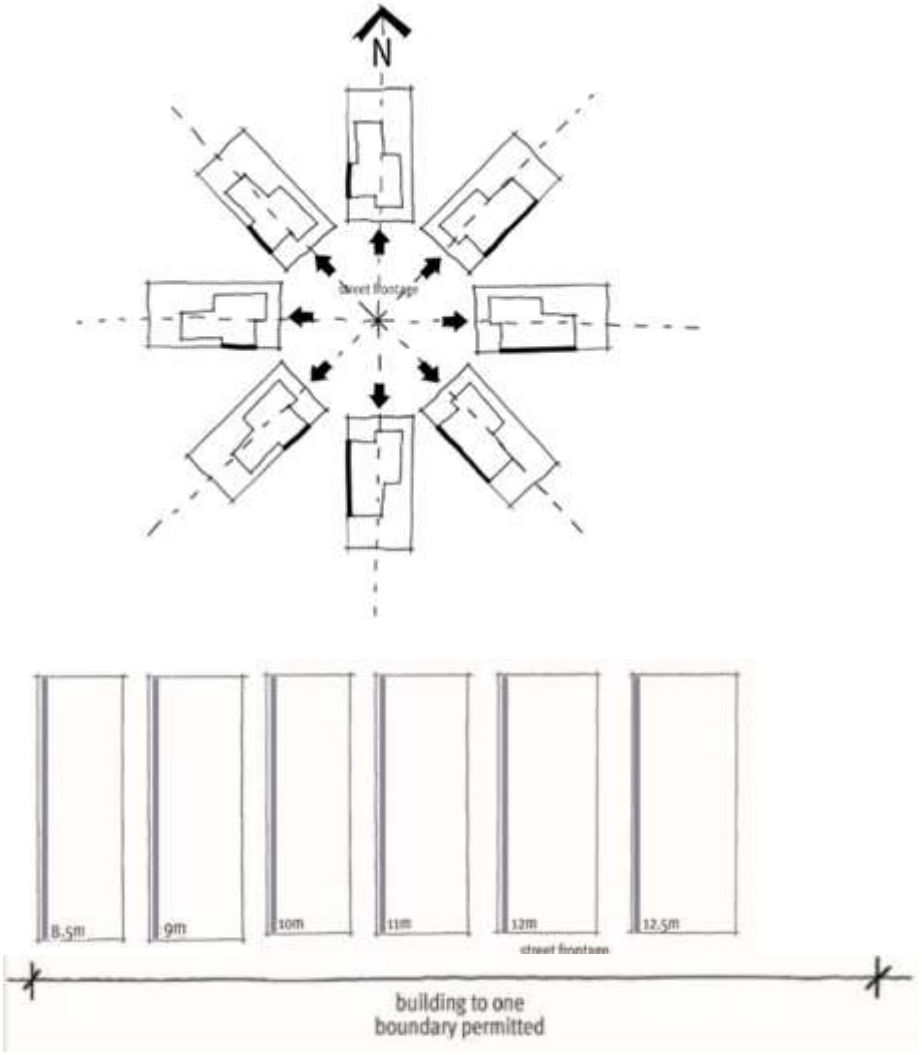
c) The location of a zero lot line is to be determined primarily by topography and should be on the low side of the lot to minimise water penetration and termite issues. Other factors to consider include dwelling design, adjoining dwellings, landscape features, street trees, vehicle crossovers and the lot orientation.

d) A maintenance easement of at least 900mm is to be provided on the boundary adjacent to the zero lot line.

e) Fascias, gutters, downpipes, eaves (up to 450mm wide) and chimneys flues may encroach into the side setback.

f) No windows are provided in zero lot line walls.

Figure E7.89: Zero Lot Lines and Zero Lot Lines Location



7.5.4.5 Solar Planning

A. Objectives

a) To achieve a high standard of residential amenity; and

b) To protect reasonable amenity expectations of neighbouring sites.

B. Development Controls

a) Areas of Principal Private Open Space should achieve at least 3 hours of sunlight to 50% of area of Principal Private Open Space between 9am and 3pm on 21 June.

b) Buildings should be designed to ensure that 40% of the Principal Private Open Space areas of adjoining dwelling sites receive a minimum of 3 hours of sunlight between 9.00am and 3.00pm on 21 June each year.

7.5.4.6 Dwelling Design

The development will comprise of various built form structures ranging from housing at different densities as well as local shops, community building and a school. Development Applications for built form will address the controls for the siting and design of dwellings.

A. Objectives

a) To provide simple and articulated building forms.

b) To provide a high quality and cohesive streetscape.

c) To promote an architectural style that is complementary to its context and innovative.

d) To promote a safe public domain area.

e) To promote energy efficient and sustainable development.

f) To reduce the dominance of garages on the streetscape through facade treatment.

g) To identify appropriate design responses for corner lots.

h) To provide variety in the streetscape presentation of dwellings that generate a range of characters in different precincts.

B. Performance Measures

a) All development addresses the street and is provided with a clear, legible and well lit pedestrian entry.

b) The street elevation is well articulated by the use of awnings, verandahs, balconies and feature elements on the front facades of dwellings.

c) Development will achieve the principle of three layers of front setbacks as illustrated at Figure E7.90

d) Garages will be recessed or capped by overhanging elements that provide shading over the garage opening.

e) Dwellings provide shading of north, east and west facing windows with pergolas and awnings.

f) Buildings are to be designed to allow cross ventilation by positioning windows and doors opposite each other within rooms.

g) Material and external finishes of buildings in bushfire hazard areas comprise appropriate construction standards for those areas.

h) Built forms on corners provide important place making and way finding elements in the streetscape.

i) Corner sites provide a frontage to both streets and articulate their corner location with an architectural feature such as a wraparound verandah, bay window, corner entry or roof feature.

j) Corner lots with a width less than 12 metres require garages to be accessed from the secondary street.

k) Dwellings provide adaptable house floor plans for the inclusion of a home office/business activity area.

C. Development Controls

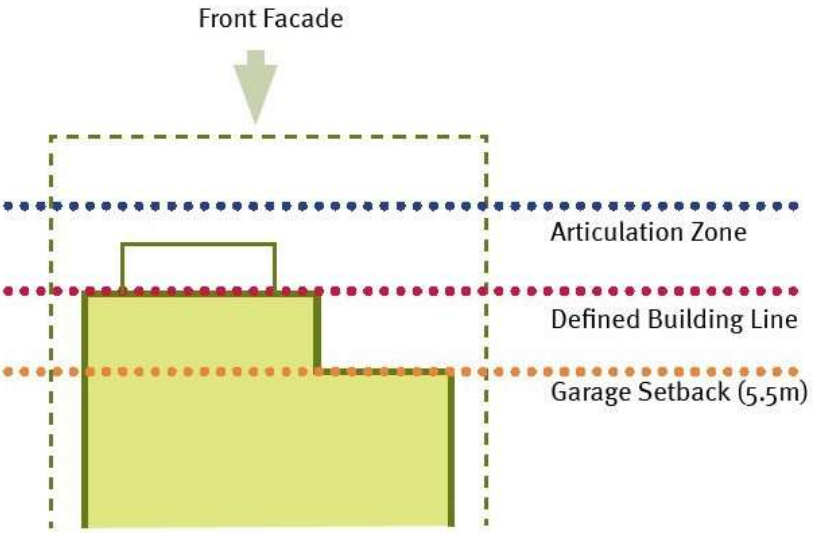
a) Verandahs, awnings, etc. may project forward of the front building setback line by a maximum of 1.5m.

b) Building elements projecting forward of the front building setback are limited to a maximum of 60% of the dwelling width.

c) Eaves are required over all walls except those on zero lot lines.

d) External building materials/finishes are to be varied across front elevations of buildings.

Figure E7.90: Setbacks and Articulation



7.5.4.7 Visual and Acoustic Privacy

A. Objectives

a) Ensure buildings are designed to achieve the highest possible levels of visual and acoustic privacy.

b) Protect visual privacy by minimising direct overlooking of habitable rooms and private open space.

c) Contain noise within dwellings and minimise the intrusion of noise from outdoor areas.

d) Ensure certain lots located in proximity to The Northern Road incorporate acoustic attenuation by including the requirement on title if required.

B. Performance Measures

a) Windows to upper storeys to be located on front or rear facades where possible.

b) Offset second storey windows of living areas that face directly to windows, balconies or private open space of adjoining properties.

c) First floor balconies or living room windows not permitted to directly overlook private open space of adjoining dwellings unless suitable screening is provided.

d) The design of attached dwellings must minimise the opportunity for sound transmission through the building structure, with particular attention given to protecting bedrooms and living areas.

e) Living areas and service equipment are located away from bedrooms of neighbouring dwellings.

f) In attached dwellings, bedrooms of one dwelling are not to share walls with living spaces or garages of adjoining dwellings, unless it is demonstrated that the shared walls and floors meet the noise transmission and insulation requirements of the Building Code of Australia.

g) Noise sensitive areas are to be located away from the noise emitting sources.

C. Development Controls

a) Habitable room windows with a direct sight line to habitable room windows in adjacent dwellings are to be avoided, however within 9m must be obscured by fencing, screens, or sufficient landscaping;

b) A screening device is to have a maximum of 25% permeability to be considered effective.

c) Applications for subdivision within 150m of The Northern Road will include an acoustic report to identify the land and appropriate noise attenuation measures to be incorporated in each building (any dwellings and school) to satisfy the requirements in State Environmental Planning Policy (Infrastructure) 2007.

d) Land fronting The Northern Road north of the sports fields (District Park 3) is level or elevated above The Northern Road and hence proposals should include acoustic mounding. For this area it is proposed that a landscape buffer be planted along The Northern Road frontage. An acoustic report is to accompany any Development Application to address acoustic upgrades to the facades of dwellings houses in this area having regard to the height of mounding proposed.

e) Land fronting The Northern Road south of the sports fields (District Park 3) is level or below the level of The Northern Road and hence mounding is impractical. For this area it is proposed that a landscape buffer be planted along The Northern Road frontage. An acoustic report is to accompany any Development Application to address acoustic upgrades to the facades of dwellings houses in this area.

7.5.4.8 Defining Boundaries

A. Objectives

a) Creates a clear distinction between public and private domain areas.

b) To ensure front fences contribute to the streetscape.

c) Maintain safety in the public domain.

d) Rear and side fencing provide privacy to open space areas.

B. Performance Measures

a) Delineation of front property boundaries is achieved through use of landscaping, low fences or changes of site level.

b) Side property fences in front of the building line shall be treated as the front fence.

c) Side property fences terminated at the front building line and returned to finish against the building.

d) All retaining walls are to be of appropriate materials and where located on a boundary, traditional fencing material to be positioned on top of the retaining wall. Use of timber is not permitted.

C. Development Controls

a) Fences to the street frontage:

   i. are to be a maximum of 900mm in height.

   ii. may be a maximum of 1.2m in height where they define the primary open space of a dwelling.

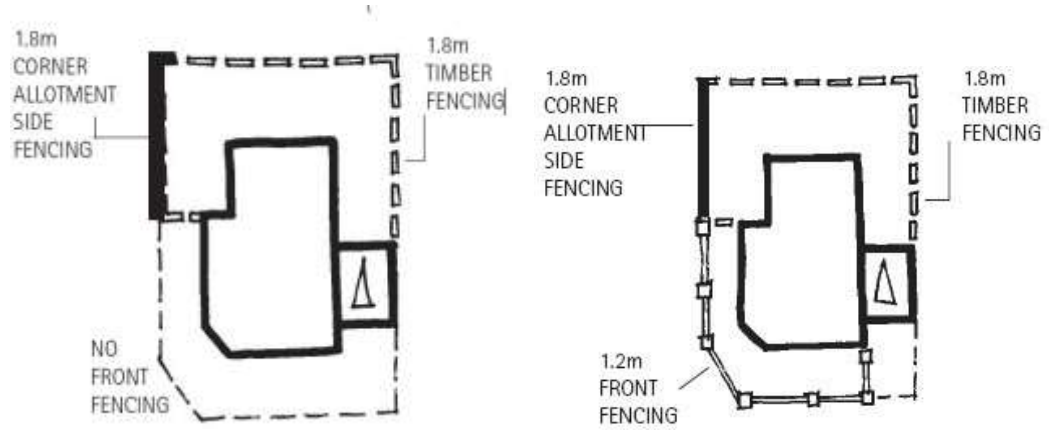
b) Side property fences are to be a maximum of 1.8m high (not including any retaining wall element).

c) Fences to corner lots that accommodate single dwelling houses are to be a maximum 900mm high on both the primary street frontage and secondary street frontage to a point consistent with the front building line of the dwelling where it may then increase to 1.8m in height.

d) Fences to corner lots that accommodate multi-unit housing forms are to be a maximum of 900 mm on the primary street frontage and 900 mm in height along the secondary street frontage in areas in front of the built form or 1.2m if they define the primary open space areas.

e) Where solid fences are required to satisfy acoustic abatement, these fences shall not exceed 8m in length without some articulation or detailing to and must be softened on the street side with a landscaping strip of 700mm minimum.

Figure E7.91: Examples of Corner Lot Principles



7.5.4.9 Site Facilities

A. Objectives

a) To ensure that adequate provision is made for site facilities.

b) To ensure that site facilities are functional and accessible to all residents and are easy to maintain.

c) To ensure that site facilities are thoughtfully integrated into development and are unobtrusive.

B. Performance Measures

a) Development demonstrates that the design has considered garbage bin storage and collection without reducing the amenity of the dwelling or neighbouring lots.

b) Garbage bin storage and mailbox structures are to be integrated with the overall design of buildings and/or landscaping and are not visible from the street or rear lane way.

c) External clothes drying areas are to be provided for all residential development.

7.5.5 Typical Development Forms

The development will comprise of various built form structures ranging from housing at different densities as well as local shops and a school. Development Applications for built form will address the controls for the siting and design of dwellings.

7.5.5.1 Dwellings on R2 Low Density Residential Lots

A. Performance Measures

a) Dwellings are sited on lots to enhance the detached housing form and contribute to the well landscaped streetscape character.

b) Dwellings should be sited and designed to maximise the ability to utilise passive solar principles to reduce energy use.

c) Front setbacks provide articulation to add architectural interest. All development addresses the primary street and secondary street where relevant.

d) Front setbacks are increased to satisfy asset protection zone requirements when lots are located opposite a bushfire hazard including Mulgoa Nature Reserve and environmental corridors.

B. Development Controls

Allotment Requirements	
Minimum Lot Size	300m^2
Minimum Lot Frontage	10m
Principal Private Open Space	
Minimum Area	40m^2
Minimum Dimension	4
Minimum Dwelling Setbacks	
Front*	4.5m
Secondary (corner lots)	2m
Side: Zero-lot (benefited) Zero-lot (burdened) Detached	 0m at ground floor 1.2m at second storey 0.9m at ground floor 0.9m at second storey 0.9m
Rear: Ground Upper	 4m 6m
Other Requirements	
Height	Maximum 2 storeys

a) For R2 zoned lots wider than 12.5m, side setbacks of 900mm are proposed. This would result in a separation of at least 1.8m between external walls of dwellings on adjoining lots of the same width.-

b) For R2 zoned lots with a width of 12.5m or less, a zero-lot line model is permitted. Easements for access and maintenance (900mm wide) will be created on the adjoining lot to allow dwellings to be constructed on the zero-lot line boundary to provide separation for future dwellings.

A second storey dwelling setback of 1.2m is also proposed. This will further reduce the bulk and scale of any dwelling and provide increased building separation.

c) Garages will be setback 5.5m to allow a car to park in the driveway.

d) Verandahs and awnings can project 1.5m forward of the front setback for a maximum 60% of the dwelling width, ensuring they can enable sufficient space to accommodate at least one tree.

e) On zero lot line lots, a dwelling can be located on the side boundary provided no openings are in that wall and the opposite side boundary shall have a 0.9m setback for the ground floor protected with a maintenance easement. Eaves are not required over those walls located on a zero lot line. Facias, gutters, downpipes, and chimney flues may encroach into this side setback. See Figure E7.91.

f) Front setbacks above the minimum may be required to be increased where opposite a bushfire hazard and in accordance with Asset Protection Zones (APZ) of a scale and type suitable to the NSW Rural Fire Service as outlined in Planning for Bush Fire Protection 2019.

g) Development demonstrates that the design takes into account garbage bin storage and collection without reducing the amenity of the dwelling or neighbouring lots.

h) Mailbox structures are to be integrated with the overall design of buildings and/or landscaping.

Figure E7.91: Zero lot line dwelling configurations

7.5.5.2 Dwellings on R3 Medium Density Residential Lots

A. Performance Measures

a) Dwellings are sited and designed to provide a cohesive streetscape character

b) Medium Density developments may:

i. Provide parking with a rear loaded garage accessed from a rear lane or shared driveway.

ii. Provide dwellings located above a ground level garage that fronts a rear lane and on a lot that is a corner parcel. Studios will count toward the maximum dwellings in a Precinct.

c) Protect visual privacy by minimising direct overlooking of habitable rooms and private open space.

B. Development Controls

Allotment Requirements	
Minimum Lot Size	180m^2
Minimum Lot Frontage	6m
Principal Private Open Space	
Minimum Area	25m^2
Minimum Dimension	2.5m
Minimum Dwelling Setbacks	
Front	3m
Secondary (corner lots)	2m
Side: Zero-lot (benefited) Zero-lot (burdened) Detached Dwellings Attached Dwellings	 0m at ground floor 1.2m at second storey 0.9m at ground floor 0.9m at second storey 0.9m at ground floor 0.9m at second storey 0m
Rear Adjoining residential development Adjoining a rear lane or shared driveway	 5m 0m
Other Requirements	
Height	Maximum 2 storeys

a) Garages will be setback 5.5m to allow a car to park in the driveway.

b) On zero lot line lots, a dwelling can be located on the side boundary provided no openings are in that wall and the opposite side boundary shall have a 0.9m setback for the ground floor and 1.2m for the first floor protected with a 0.9m maintenance easement. Eaves are not required over those walls located on a zero lot line. Fascias, gutters, downpipes, and chimney flues may encroach into this side setback. See Figure E7.91.

c) Where an attached dwelling is located adjacent to a detached dwelling there shall be no openings in the wall and the detached dwelling shall have a 0.9m maintenance easement. Eaves are not required over those walls located on a zero lot line. Fascias, gutters, downpipes, and chimney flues may encroach into this side setback.

d) Front setbacks above the minimum may be required to be increased where opposite a bushfire hazard and in accordance with Asset Protection Zones (APZs) of a scale and type suitable to the NSW Rural Fire Service as outlined in Planning for Bush Fire Protection 2019.

e) Part of the private open space can be provided as a balcony with a minimum dimension of 2.0m.

f) Each medium density lot is to make provision for the planting of one tree.

g) Development demonstrates that the design considers garbage bin storage and collection without reducing the amenity of the dwelling or neighbouring lots.

h) Garbage bin storage is to be integrated with the overall design of buildings or otherwise screened.

i) Mailbox structures are to be integrated with the overall design of buildings/fencing.

j) External clothes drying areas are to be provided for all residential development.

7.5.5.3 Studios

A. Performance Measures

Development is designed to:

a) Be located above garages that are accessed from rear lanes or shared driveways.

b) Provide their own sleeping, living, kitchen and bathroom areas.

c) Provide casual surveillance over rear lanes or shared driveways.

d) Provide windows and private open spaces that do not overlook the private space of any adjacent dwellings.

e) Do not overshadow the private open space of living space of any adjacent dwelling.

f) Balconies or verandahs do not overhang vehicle access areas.

B. Development Controls

a) Studio units are delivered as developments of up to 3 dwellings on a corner lot with an area of at least 360m2 where one of the dwellings is located above a garage or garages that fronts a rear lane. They comprise their own sleeping, living, kitchen and bathroom areas located above garages and are accessed from rear lanes or shared driveways. Balconies serve as private open space for studios. Balconies are to be 6m2.

b) Studio units are designed so that windows and balconies do not overlook the private space of any adjacent dwellings but provide casual surveillance over rear lanes or shared driveways. Studio units should seek to minimise overshadowing the private open space or living space of any adjacent dwelling.

c) There is no requirement to provide parking for studio units.

d) Studio units and other dwellings forming part of the development can be strata subdivided.

7.5.5.4 Dwellings on C4 Environmental Living Lots

A. Performance Measures

a) Dwellings are sited to retain the existing rural character and/or respond to bushfire hazard including retaining existing trees as far as practicable.

b) Only one driveway is permitted per lot frontage and shall be designed to Council's rural standard.

c) All front, secondary and side boundary fencing in front of the dwelling will be a hardwood timber, post and rail construction.

1.The Northern Road Interface Frontage Lots

B. Development Controls

Allotment Requirements	
Minimum Lot Size	4000m^2
Lot Frontage	50m
Minimum Dwelling Setbacks	
Front	20m
Secondary frontage	5m
Side:	5m
Rear	15m

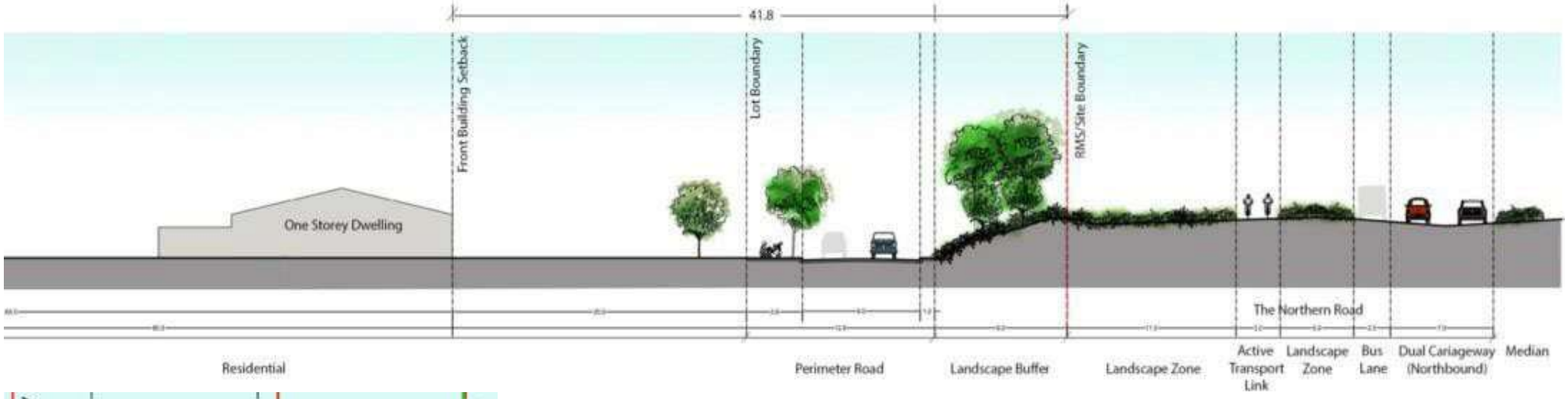
a) Direct vehicular access to The Northern Road is not permitted.

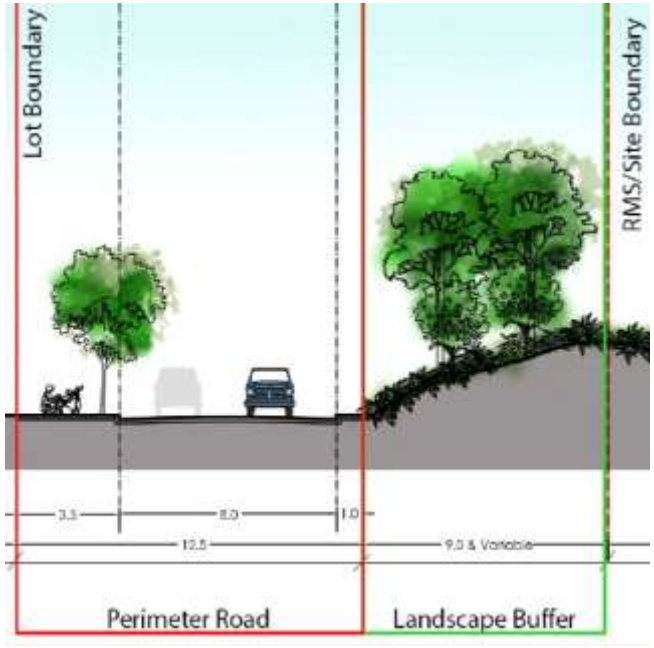
b) Lots that front The Northern Road and are south of District Park 3 are to face an internal perimeter road. The perimeter road is separated from The Northern Road / Transport for NSW boundary by a landscape buffer of around 10m wide as shown in Figure E7.92.

c) Lots adjacent to The Northern Road and north of District Park 3 provide an interface with earthworks, mounds and a landscape buffer of around 10m wide to create a substantial screen to control views from and to The Northern Road. Access to these lots will be via the internal road network.

d) Species selection and planting along The Northern Road and within the landscape buffer must consider existing overhead electricity infrastructure.

Figure E7.92 Cross Section of Lots fronting The Northern Road, Internal Perimeter Road and The Northern Road road reserve.





2. Chain-O-Ponds Road Interface Frontage Lots

Allotment Requirements	
Minimum Lot Size	2000m^2
Lot Frontage	50m
Minimum Dwelling Setbacks	
Front	10m
Secondary frontage	5m
Side:	5m
Rear	10m

3. Lots Adjacent to: Mulgoa Nature Reserve, C2 Environmental Conservation Zoned Land or C3 Environmental Management Zoned Land

Allotment Requirements	
Minimum Lot Size under PLEP	1000m^2 or 2000m^2
Minimum Lot Frontage Minimum lot size 1000m^2 Minimum lot size 2000m^2	 20m 30m
Minimum Dwelling Setbacks	
Front	6.5m or as required by the APZ
Side Lots under 20m Lot frontage 20m and over	 1m 3m
Rear	10m or as required by the APZ

7.5.5.5 Non-Residential Development

A. Performance Measures

a) Non-residential development should be planned and designed according to principles of traditional suburban design, and to preserve the amenity of residential neighbourhoods.

b) Principles of urban form and urban design that apply to permissible multi-unit housing are applied to non-residential development.

c) Particular attention is paid to:

i. The development site including front setbacks, rear setbacks, dual frontage situations.

ii. Urban form including:

- Traditional building design features.
- Traditional garden frontages.
- Orientation of building entrances.
- Continuously occupied rooms facing the street.
- Detailed consideration of significant townscapes or landscapes.
- Signs.

iii. Driveways and parking including:

- Provision of on-site parking appropriate to the proposed use, and in accordance with Penrith Council's parking codes, the RTA or Australian Standards.
- Minimise site coverage by paved areas.
- Conceal garages from views available from public parks and streets.
- Locate driveways and parking areas away from any neighbouring residential development.

iv. Building envelope and side setbacks:

- To achieve a single storey appearance.
- To provide for effective landscaped separation from adjacent developments.

v. Minimise overshadowing of adjacent properties and minimise requirements for

vi. mechanical heating and cooling of interiors.

vii. Protect the privacy of adjacent properties.

viii. Sufficient areas are provided for storage and building services to meet requirements generated by the proposed development and located to protect the amenity of adjacent developments.

7.5.6 Lot Development, Grading and Earthworks

A. Objectives

a) Development should respond to the site's natural topography and general landform, minimizing excavation and potential visual impacts.

b) To create an appropriate landform across the development area that takes into account and responds to site natural features such as riparian corridors and remnant bushland.

c) Encourage appropriate dwelling design to suit the topography of lots.

d) Minimise the incidence of cut and full and alterations in finished ground levels after subdivision site grading works.

B. Development Controls

a) Earthworks allow for the preservation of existing mature trees, particularly in open space, environmental living zones and environmental conservation zones.

b) All retaining walls shall be of masonry construction and must be wholly located within the lot boundary in the locations shown on the approved Engineering Drawings.

The maximum height of any retaining wall structure shall be 1.5m. All retaining walls must be constructed in future private lands. Retaining walls constructed on land to be dedicated to Council will not be accepted without separate written approval by Councils Engineers. A compliance certificate by a qualified registered structural engineer will be required to confirm the construction is in accordance with the design.

c) Retaining wall heights are measured from the top of the footing to the top of the wall.
d) Rear boundary retaining walls for development on slopes should not exceed 1.5m in height.
e) Side boundary retaining walls for development on cross slopes should not exceed 1.5m in height.
f) Applicants to refer to the C4 Land Management section of the Penrith DCP 2014.
g) Applicants to refer to the D2 2.1.3 Development on Sloping Land.
h) Any development outside these controls to be considered on its merits.

7.5.7 Development Staging

It is intended that the development of Glenmore Park Stage 3 will be staged generally in accordance with Figure E7.93. The objective of staging is to facilitate the timely and efficient release of urban land, subject to infrastructure availability/provision, and sequencing.

Development of the site will likely be progressed where more than one stage will be under construction at any particular time. For example, development will continue southwards from the existing Glenmore Park Stage 2 boundary, and development will also commence northwards from Chain O Ponds Road.

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

a) available and future infrastructure,
b) site access,
c) public domain delivery,
d) traffic and parking limits, and
e) as each development is delivered, the supporting infrastructure must be provided. All relevant supporting studies must be completed with each major development application.

A. Objectives

a) To facilitate the orderly delivery of the site,
b) To ensure that adequate services are provided at each stage of development,
c) To ensure that infrastructure anticipates future development,
d) To manage and minimise potential adverse impacts of each major development application, including on adjoining land,
e) To ensure that development does not exceed floor space or parking limits identified for the area.

C. Development Controls

a) A concept plan is required to accompany the development application for each stage of development, demonstrating no adverse impacts on the proposed subdivision or adjoining land.
b) Each development application for each stage of development is to identify the infrastructure provision necessary to service the development. This includes, but is not limited to:
    i. Power,
    ii. Water and gas supply,
    iii. Drainage works,
    iv. Roadworks.
c) Infrastructure provision is to anticipate future development adjacent and linked to the site. The provision is to ensure that any disruption to new roads and services is minimized as future projects are brought online.
d) Major new development will require evaluation of parking and traffic generation.
e) Staging is indicative only and subject to provision of servicing infrastructure, earthworks strategy and drainage catchments.

Figure E7.93 Indicative Development Staging Plan