Summary of major differences with current DCP

- Provide additional guidance and improve certainty for subdivision designers and developers.
- Respond to changing community expectations regarding the standard of new subdivisions.
- Provide greater clarification regarding what assets Council will accept in relation to new development.
- Provides introductory information about the role of planning agreements in development of land.
- Ensures new subdivisions thoroughly consider the features and characteristics of the land and locality and exhibit a strong sense of place.
- Ensures constraints and opportunities are properly considered early in the design and assessment stages.
- Provides for greater flexibility in subdivision design, relating to the size of lots and road reserves.
- Seeks to preserve historical sites, buildings, places and landmarks by sensitively integrating them into subdivision design.
- Seeks to improve accessibility, interaction and engagement with European and Aboriginal cultural heritage.
- Ensures new subdivisions provide landscaping for shade, wind breaks and aesthetics and support local biodiversity.
- Ensure new subdivisions protect and enhance high biodiversity habitat, and Council's DCP complements NSW biodiversity conservation legislation.
- Establishes habitat tree, street tree and vegetation establishment periods, management plans and bonding arrangements to protect Council and the community.
- Seeks to protect riparian areas, estuaries, wetlands and the oyster industry from the impacts of development.
- Seeks to minimise land use conflict.
- Strengthens controls regarding long-term maintenance and renewal costs of infrastructure for Council and residents.
- Ensures subdivision design considers waste collection.
- Integrates the NSW Movement and Place Framework into Council's DCP by ensuring the dual function of streets as places for people and movement, with road design responding to the specific circumstances of the street.
- Ensures roads are arranged in a logical hierarchy.
- Provides greater certainty for applicants regarding required road upgrades in association with greenfield and infill subdivisions.
- Provides a selection of road typologies and cross-sections for use by subdivision designers, informed by the NSW Design of Roads and Streets Manual.
- Introduces a requirement for a Slope Management Plan for new subdivisions on land steeper than 10% slope and provides more guidance on subdividing sloping land.
- Refinements to guidance regarding integrating small lots.
- Clarifies when driveways need to be formed at the subdivision stage.

- Clarifies that Council will not accept retaining walls on public land, and provides limitations on retaining walls adjacent to public land.
- Clarifies language pertaining to driveway crossovers in the road reserve and internal driveways on private property.
- Ensures new subdivisions promote walkability, connectivity and legibility within and between residential neighbourhoods by providing safe, direct, accessible and convenient neighbourhood street infrastructure for active travel, public transport users and motorists.
- Provides maximum distances between public seating on Connector streets, Neighbourhood streets and streets close to schools and aged-care facilities.
- Provides guidance for designing walkable neighbourhoods.
- Ensures new greenfield subdivisions contribute to the open space network in accordance with benchmarks and standards described in the Draft Greener Places Design Guide.
- Ensures subdivision design consider opportunities to make new residential lots more resilient to natural hazards.
- Clarifies Council's requirements for servicing of new lots.
- Provides greater guidance for the design of industrial and rural residential subdivisions.

5.10 Subdivision Standards

Introduction

The way land is subdivided is fundamental to its quality and character, with long-term impacts to sustainability and residents' quality of life. Once a street pattern is formed, it is very difficult to change, and therefore significant care is required when designing subdivisions.

Better practice subdivision design responds to elements in the natural landscape to make a subdivision unique or memorable.

"***Subdivision of Land***" refers to the process of formally dividing land into two or more parts. This process encompasses the creation of lots in conventional (Torrens), Strata and Community Title subdivisions.

"***Greenfield subdivision***" means subdivision of a large area of rural or vegetated land, whether for the purpose of residential, commercial, industrial or rural residential development, and includes the creation of new roads.

"***Infill subdivision***" means subdivision of previously subdivided residential, commercial, industrial or rural residential land, and does not involve the creation of a new road.

"***Active travel***" means walking, riding, or rolling, whether as a pedestrian, on a bicycle, an e-scooter, a wheelchair, or any other mobility device.

Application

This section applies to all land in the Bega Valley Shire. The standards contained within this plan apply to subdivision developments including conventional, Strata and Community Title subdivisions.

This Section should be read together with other DCP sections relevant to the subdivision.

Technical Standards

The guidelines and specifications for the design and construction of public infrastructure as part of development are set out in the following:

- Council Development Engineering Guidelines
- Council Development Design Specification
- Council Development Construction Specification
- Council Stormwater Drainage Guidelines for Development
- Water Servicing Association of Australia (WSAA) codes

General requirements

Application

This section applies to all types of subdivision across all land use zones.

Planning Agreements

Guidelines

- Developers of land have the choice of either:

  a) making the contribution to Council, and Council then uses those contributions to deliver local infrastructure, or
  b) offering to directly provide public infrastructure on behalf of Council and the community.

  Council recognises that greater efficiencies often can be achieved through developers of land delivering public infrastructure as part of their developments, instead of Council. A formal agreement between Council, the developer and (where the developer does not own the land) the landowner/s is needed to make this happen. These agreements, termed 'planning agreements', are voluntary for both Council and proponents. For more information about planning agreements, see: *Policy 4.11 Planning Agreements*.

- Where the applicant is proposing a Voluntary Planning Agreement with Council in lieu of, or in addition to, development contributions, the application should advise of that intention and outline the details in an initial Letter of Offer.

Sense of place

Place analysis plan

Objective

- Ensure the features and characteristics of the site and adjacent land are understood early in the design process.
- Ensure new release areas exhibit a strong sense of place by enhancing existing natural features, landscape and local character.

Control

1. New subdivisions shall provide public access to waterways, waterfronts, cliff lines and nature reserves.

2. Sightlines to natural features, heritage items, cultural landscapes, and scenic vistas shall be retained from reserves, roads and paths where possible.
3. New subdivisions shall consider *3.1 Residential Character Statements.*
4. All applications for subdivision will be supported with a place analysis plan that:
    a. demonstrates how the subdivision creates a sense of place
    b. informs the subdivision design.

    Details of what the place analysis plan should include are outlined in the Guideline below.

5. The siting of dwellings on visible ridgelines is not supported.

Guidelines

- The place analysis plan will include:
    - items of heritage
    - land use zone/s
    - slope gradients and aspect
    - existing dwellings or structures to be retained or removed
    - areas of ecological importance and significant vegetation (including the location of individual hollow-bearing trees)
    - rock outcrops
    - watercourses and riparian areas
    - drainage lines
    - access constraints
    - bush fire mapping
    - flooding and coastal hazards mapping
    - potential sources of offensive noise or odours up to 1000m distance from the site
    - potential land contamination
    - surrounding incompatible or potentially incompatible land use
    - surrounding sensitive land uses such as oyster leases
    - land capability for safe disposal of effluent (if on-site wastewater systems are proposed)
    - sightlines to natural features, items of historical significance (such as buildings or Aboriginal cultural heritage) and scenic vistas
    - significant natural features such as waterways, ridgelines and bushland corridors that can be preserved and enhanced, or where access could be provided or enhanced
    - bushland and waterway corridors that could form the backbone of green infrastructure by offering opportunities for active transport connections or integrated open space planning that supports Water Sensitive Urban Design and local habitat conservation
    - opportunities to restore wildlife corridors or provide connectivity between natural areas
    - significant trees and opportunities for future significant trees.

Culture and heritage

Objectives

- Preserve historical sites, buildings, places and landmarks by sensitively integrating them into subdivision design.

- Improve accessibility and community interaction and engagement with European and Aboriginal cultural heritage.

Controls

1. Ensure the location of new boundaries, and associated resulting development, respects the curtilage of heritage items and sites.
2. Where a heritage item or significant tree is to be located on private land, the subdivision plan will identify building envelopes.

Note: Significant tree means a tree with special significance, which may be aesthetic or situational, and includes trees that are listed as heritage items, hollow-bearing trees and Aboriginal culturally modified trees.

Guidelines

- All subdivision that could impact Aboriginal cultural heritage must comply with the requirements of *5.1 Aboriginal Heritage.*
- All subdivision in Heritage Conservation Areas, or on land containing a heritage item or within 100m of a heritage item, must comply with the requirements of *5.2 Non Aboriginal Heritage.*

Trees and vegetation

Objectives

- Use trees and vegetation for shade, wind breaks and aesthetics and support local biodiversity.

Controls

1. Greenfield subdivisions shall be supported with a landscape plan by a person with horticultural or environmental management qualifications.
2. New greenfield subdivisions will incorporate street tree plantings with species selection and placement to the satisfaction of Council. Council will not accept dedication of irrigation systems in association with street tree plantings.
3. Tree planting in new residential streets shall be:
    a. at one tree per lot for all primary frontages up to 20m width, generally located at the centre point of each lot frontage, or otherwise at a maximum 10m spacings where lots have a primary or secondary frontage to a road where driveways are not prohibited, and
    b. at 10m intervals along: the outer edge of all perimeter roads (i.e. no primary or secondary lot frontages), riparian crossings, public/drainage reserve frontages, and all roads or parts of roads with vehicular access prohibition.
4. Tree planting in new industrial areas shall be at a spacing of one tree every 20m or located to avoid likely driveway siting.
5. In rural residential subdivisions, minimise impacts to existing habitat by seeking to preserve existing established trees and/or vegetation in the road reserve, as appropriate to comply with *Planning for Bush Fire Protection 2019*.
6. The landscape plan shall demonstrate that new public open space:
    a. will be planted so that, at maturity, at least 20% of the open space will be protected from direct sunlight at midday on 21 December
    b. incorporates a mix of upper- and under-storey species including native grasses and shrubs.

7. Where required, plants shall be planted prior to issue of the subdivision certificate and will be subject to bonding arrangements.
8. The applicant is responsible, unconditionally, for any/all plant replacements necessary during the 24-month establishment and maintenance period (commencing from the date of issue of the subdivision certificate) and will provide to Council a financial security (bond) in an amount equal to 200% of the cost of supply, installation, establishment and maintenance of the plants and associated timber tree guards.
9. Any dead or dying plants at the end of the maintenance period shall be replaced by the applicant.
10. The applicant shall provide, prior to issue of the subdivision certificate, a long-term management plan for the plants, prepared by a person with horticultural or environmental management qualifications.
11. The plants shall be freshly weeded, mulched and pruned (if necessary) by a suitably qualified and experienced horticulturalist or arborist immediately prior to handover of the civil assets to Council.

Guidelines

- Take cues from locally endemic and introduced species that are thriving in the locality to compile a distinctive selection of trees and vegetation.
- Refer to Council's Landscaping Guidelines for detailed design guidance and local weeds list to avoid.
- Use the tree canopy to frame significant views.
- Consider the co-location of shallow swales with tree and vegetation plantings to reduce the need for active watering.
- Landscaping for shade and wind breaks includes strategic plant selection and siting vegetation buffers and shelterbelts for enhanced climate control. Landscaping should seek to mitigate prevailing winter winds and promote the circulation of cooling summer breezes, taking into account significant topographical features such as valleys and ridges.

  Care is needed to ensure that plantings are effective without creating a future bush fire hazard. For guidance, refer to Planning for Bush Fire Protection's Bush Fire Protection Measures in relation to landscaping.

Ecology and habitat

Objective

- Protect and enhance high biodiversity habitat.

Controls

1. Minimise the extent of native vegetation clearing by locating the development footprint in existing cleared areas, wherever possible.
2. Avoid impacts on threatened species, threatened ecological communities and areas of high biodiversity values.
3. Minimise impacts on established and hollow-bearing trees.
4. Initial biodiversity assessment will consider the ecological value and health of hollow-bearing trees and seek to identify groups of significant trees that can be retained and protected. Initial subdivision design shall seek to locate:
    a. groups of trees into a robust area of retained vegetation in the first instance, and then

b. individual trees into wider road reserves away from underground services or into larger private landholdings with identified building exclusion areas (that will be subject to a restriction on the use of land).

5. Except for land proposed to be retained as natural areas, and/or in accordance with a Council-endorsed vegetation management plan, all established or hollow-bearing trees proposed to be dedicated to Council must be assessed by a Council-endorsed, qualified and experienced arborist to determine appropriate pruning and conservation measures. Council will not accept dedication of land containing established or hollow-bearing trees that have not been properly managed and maintained by the arborist prior to transfer.
6. Where an established or hollow-bearing tree is to be retained within a residential or rural residential lot, the plan of subdivision shall identify a fixed building envelope providing adequate separation from the tree.
7. Minimise the edge interface between vegetated areas and residential lots.
8. Where possible, avoid disturbing steep slopes over 15%.

Guidelines

- The removal of native vegetation in association with subdivision works is regulated by the *Biodiversity Conservation Act 2016* and Commonwealth *Environment Protection and Biodiversity Conservation Act 1999.*
- All development that proposes clearing of native vegetation, including native grasslands, must undertake an assessment of whether the Biodiversity Offsets Scheme applies.
- Development must seek to avoid impacts on areas of high biodiversity value to meet the objectives of the *Biodiversity Conservation Act 2016*. Practical application of this requirement may include establishing natural areas within new greenfield subdivisions. Habitat replacement by succession planting with species from the local plant community type may be required. Any proposed plantings need to consider implications for compliance with *Planning for Bush Fire Protection 2019,* which provides guidance on narrow vegetation corridors and low-threat vegetation exclusions.
- Naturals areas can be retained on private land or community title (with a restriction placed on the title), or incorporated into open space, however Council will only accept dedications of land that are consistent with its *Policy 4.10: Lands under Council Jurisdiction* and associated Procedure 4.10.5.
- Where there is insufficient information available to Council to justify a conclusion that a subdivision will not have a significant impact on high biodiversity habitat, the precautionary principle requires that Council not grant consent to that development.

Riparian areas, estuaries and wetlands

Objectives

- Protect riparian areas, estuaries, and wetlands.
- Minimise site disturbance.
- Implement water-sensitive urban design.

Controls

1. Identify and show on the subdivision plans whether there is a watercourse or waterbody present and determine:
    a. its order in accordance with the Strahler System
    b. the associated vegetated riparian zone width and total riparian corridor width.

2. Minimise disturbance and harm to the vegetated riparian zone. Where possible, retain watercourses and/or waterbodies within one lot and avoid locating new boundaries across natural drainage lines and watercourses, to minimise the need for impractical boundary fencing.
3. Provide vehicular access which minimises watercourse and drainage depression crossings, cut and fill, and vegetation removal.
4. Where consistent with Policy *4.10 Lands Under Council Jurisdiction* and associated Policy 4.10.5, major watercourses and riparian zones close to towns and villages shall be dedicated to Council and placed under active management in accordance with a plan of management submitted by the applicant and approved by Council.
5. Subdivision development that could impact on oyster aquaculture development or a priority oyster aquaculture area in the construction and/or operational phases must be informed by the publications: NSW DPI Oyster Industry Sustainable Aquaculture Strategy and NSW DPI Healthy Estuaries for Healthy Oysters - Guidelines for development near waterways and incorporate best practice water sensitive urban design treatments.
6. Council has a series of estuary management plans, coastal zone management plans and coastal management programs for various estuaries across the Bega Valley Shire. If the proposed subdivision falls within the immediate catchment of an estuary or wetland, assessment of potential impacts against these documents shall be provided with the application.
7. Proposals for urban subdivisions adjoining estuarine areas must provide stormwater modelling studies that demonstrate 'no net increase' in pollutants and limitations on volumetric runoff.
8. Proposals for subdivision shall be supported with adequate stormwater drainage design and documentation in accordance with Council's Stormwater Drainage Guidelines for Development and Technical Specification 0074 Stormwater Drainage (Design).

Guidelines

- Subdivisions adjacent to or in the immediate catchment of an estuary and/or wetland must ensure that the maintenance or enhancement of the ecological and hydrological health of the estuary and/or wetland is a primary consideration in planning and design of the subdivision.
- NSW Water regulates the protection and/or estimation of individual watercourses and their vegetated buffer zones based on watercourse order as classified under the Strahler System. The riparian areas of the shire have been described and mapped under the LEP into three categories of protection with Core Riparian Zone widths from 10 to 40m from the top of the bank according to their relative importance within the catchment. Use these and NSW Water's Guidelines for controlled activity approvals and Waterfront Land e-tool to inform initial assessment as to whether a Controlled Activity Approval is required. If a Controlled Activity Approval is required, the development application will be referred to NSW Water as Integrated Development under the *Water Management Act 2000*.
- As a condition of development consent, subdivisions adjoining riparian areas may be required to carry out rehabilitation of the vegetated riparian zone and protection works such as erosion control, fencing and planting.

Stormwater and soil management

Control

1. Subdivision design must comply with the requirements of *5.14 Stormwater and soil management*.

Land use buffers

Objective

- Reduce conflict between land uses.

Controls

1. Subdivision design will incorporate suitable buffer zones between future dwelling sites and existing agricultural operations, industries, extractive industries and haulage roads, or noise generating developments (including highways and main arterial roads).
2. Align lot boundaries with zone boundaries, where possible. If new lots contain land in more than one zone, the proposal must be consistent with the objectives of each land use zone.

Guidelines

- Refer to the NSW Department of Primary Industries fact sheet: *Buffer Zones to Reduce Land Use Conflict with Agriculture*.
- Refer to the *NSW Road Noise Policy.*
- Where new residential subdivisions are proposed adjacent to noise generating developments, an Acoustic Report prepared by a suitably qualified person may be required.
- Co-locate land use buffers with perimeter roads, conservation reserves, passive open space networks and footpaths to achieve high amenity subdivision outcomes.

Maintenance and renewal

Objective

- New subdivisions are designed to minimise the long-term maintenance and renewal costs of infrastructure for Council and residents.

Controls

1. All subdivision works must be constructed to Council's standard specifications and materials to ensure economical maintenance and renewal.
2. Public infrastructure will only be accepted by Council where consistent with Council's Policy *4.10 Lands Under Council Jurisdiction* and associated Procedure 4.10.5.
3. Minimise steep batters and the need for retaining walls on new lots to minimise costs for future land owners.
4. Council will not accept retaining walls on future public land. Retaining walls adjacent to public land shall be a maximum of 1m in height and set back 50mm from the boundary.

Waste collection

Objectives

- Ensure safe and unobstructed waste collection points, where the service is available.

Control

1. Lots fronting intermediate to high-speed road environments (70 km/h or more) shall nominate on the plan an unobstructed waste collection point that is safely and efficiently accessible to Council waste collection vehicles, taking into consideration vehicle size and suitable swept paths (in accordance with AS2890.2). In rural areas, this may require a suitable lay-by or larger crossover.

2. Where new roads are proposed to connect to the existing waste collection network, road design must cater for waste collection vehicle access incorporating suitable road width, swept paths (in accordance with AS2890.2) and safe collection points.
3. Where land is proposed to be released in stages, each stage is to allow for waste collection.
4. If bins are to be placed at kerbside for pick up, waste collection points servicing lots with multiple frontages shall be located on the least busy road.
5. Waste collection vehicle routes shall avoid the need for reversing.

Guidelines

- Waste collection vehicles are standard 22.5T GVM with 10.5m length, 2.5m width and 3.9m clearance.

Reticulated water and sewerage

Control

1. Subdivision design must comply with the requirements of *5.15 Connecting to water and sewerage services*.

Road hierarchies

Objectives

- Ensure the dual function of streets as places for people and movement, with road design responding to the specific circumstances of the street.
- Ensure roads are arranged in a logical hierarchy.

Controls

1. Roads shall be arranged in a logical hierarchy, which can be readily interpreted by those who are not familiar with the neighbourhood. Council will determine the appropriate road type.
2. Road typology selection and detailed design will respond to the specific circumstances and requirements of the street.
3. Where new roads are being created, a concept civil engineering design is required.
4. Where 10 or more peak hourly vehicle trips are expected to be generated from the development, a traffic assessment is required. Either a Traffic Impact Assessment (TIA) or Traffic Impact Statement (TIS) must be prepared in accordance with the Austroads Guide to Traffic Management Part 12 (AGTTMP12). Table 5.2 of AGTTMP12 is to be used to determine the level of assessment required.
    a) In speed zones ≥70 km/h, assessment of intersections against the Warrants in the Austroads Guide to Traffic Management P6 must be provided as part of the TIS/ TIA or as a standalone document if a TIS/ TIA is not required.
    b) A TIA, TIS and/ or warrant assessment may be required for any development at the discretion of Council. Typical factors influencing this decision are provided in the *Discretion of the road agency* section of AGTTMP12.
5. New subdivisions will nominate a suitable speed environment that reflects the unique circumstances of the proposed streets. Roads will be designed to limit vehicle speeds using a 'self-enforcing' speed environment.
6. New subdivision designs will integrate traffic control measures and infrastructure for effective traffic management.

7. Roads created and constructed in Torrens title subdivisions will be dedicated to Council as public roads by notation on the plan of subdivision. Council will only accept dedications of land that are consistent with its *Policy 4.10: Lands under Council Jurisdiction* and associated Procedure 4.10.5.
8. Existing roads forming part of or providing access to the subdivision must be improved in accordance with Table x where they do not already meet the relevant Road Type standard in the sections below.
9. The design of new roads shall generally comply with:
    a. Council's Specifications
    b. Austroads Guides
    c. Planning for Bush Fire Protection 2019

Guidelines

- Refer to NSW Design of Roads and Streets Guide and NSW Walking Space Guide to tailor streets to specific circumstances or desired outcomes.
- Splays may be required to be dedicated as public road at each road intersection within or adjoining any subdivision, to provide for optimum sight distances at intersections.
- Rear lane access may be required to provide for deliveries to the rear of shops.
- Proposed road names must be approved by Council prior to the endorsement of a subdivision certificate.
- In bush fire prone areas, road dimensions may need to vary to comply with *Planning for Bush Fire Protection 2019*.

Table x: Improvements to existing roads (subdivision)

Zones	**Subdivision type**	**Improvements required to roads fronting proposed lots**	**Improvements required to existing roads providing access to the subdivision**
R2, R3, MU1	Residential infill subdivision	• Necessary road reserve widening • Full width road construction in accordance with applicable *Urban Residential Road* type • For subdivisions resulting in up to 4 lots, where a maximum of two lots front the road, half width road construction[2] in accordance with the relevant *Urban Residential Road* type is acceptable. This only applies if the existing road is constructed to a minimum two-lane sealed standard.	• Where the subdivision relies on an existing unformed, single lane, gravel or unformalised[1] road to connect to the broader road network, that road must be upgraded to comply with the relevant *Urban Residential Road* type. • Where more than 10 peak hourly trips are expected to be generated from the development, the Traffic Impact Assessment/ Statement must assess the wider network and detail any road and intersection upgrades required to comply with the *Road Hierarchy* tables and Council's standards.
R2, R3, RU5, MU1	Residential greenfield subdivision	• Full width road construction is required in accordance with the applicable *Urban Residential Road* type	

RU5, R5, RU4, C3, C4	Village and rural residential infill subdivision	• Necessary Road Reserve widening • Upgrade frontage road to comply with the relevant *Rural Residential and Rural Road* type, excepting for infill subdivisions resulting in 4 or fewer additional lots and where the existing frontage road is a two-lane sealed standard in good condition, in which case further upgrades are not required except to facilitate access and drainage • Where the surrounding road frontage has been formalised (kerb and gutter, drainage etc) the development frontage must also be formalised. • Gravel roads will not be accepted fronting or accessing subdivision in association with a village (whether zone RU5 or R5)	• The road connecting the subdivision with the broader road network (e.g. main village thoroughfare, sub arterial road) must be a two-lane sealed standard. Where it is not already a two-lane sealed standard it must be upgraded to comply with the relevant *Rural Residential and Rural Road* type.
E1, E2, E3, E4, E5, MU1	Commercial and Industrial subdivision	• Necessary road reserve widening • Full width road construction in accordance with applicable *Commercial and Industrial Road* type • Where the opposite side of the road has already been formalised generally in accordance with the applicable *Commercial and Industrial Road* type, a half width road construction[2] is acceptable.	• The Traffic impact assessment/ traffic impact statement must assess the wider network and detail any road and intersection upgrades required to comply with the Road Hierarchy tables and Council's standards.
	Special Purpose (SP) and Recreation (RE) zones	• Merit assessment on a case-by-case basis	

1. Unformalised road generally means a two-lane sealed road without kerb and gutter, footpath, piped drainage etc.
2. See Figure x for 'Half' Width Road Construction Diagram.

3. Where the subdivision involves Crown Roads see *5.16 - Crown Roads*.

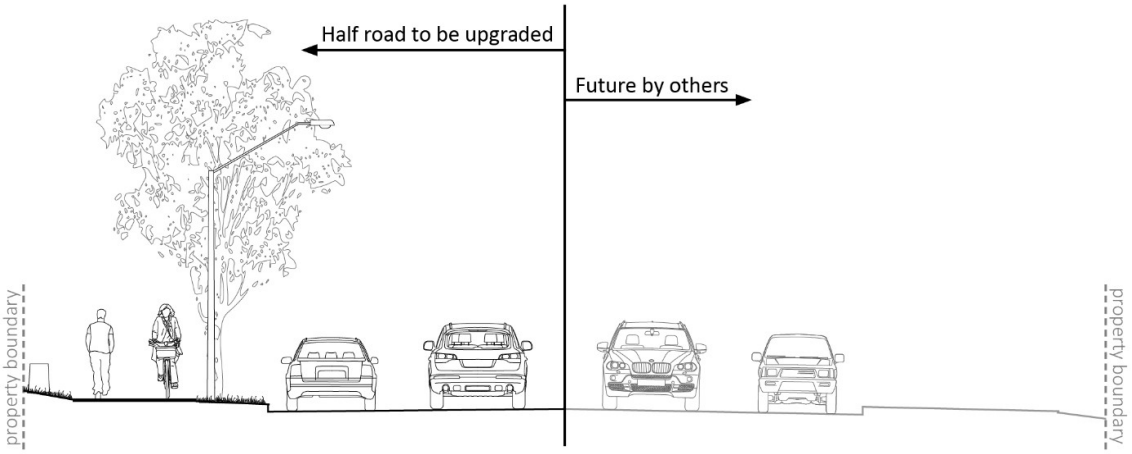


Figure x: Road cross section of 'half' road upgrade

Road Standards

Application

Council has prepared a selection of road typologies and cross-sections for use by subdivision designers, in accordance with the *NSW Design of Roads and Streets Manual*.

Urban Residential Streets

Control

1. New roads in residential subdivisions in zones R2, R3, MU1 and RU5 shall be designed in accordance with *Table x: Urban Residential Streets.*

Guidelines

- See additional guidance under each road type below.

Table x: Urban Residential Streets

Urban Residential Streets				
	Residential Lane	**Residential Way**[1]	**Neighbourhood Street**	**Connector Street**
Minimum Width of Road Reserve	6-7m	13m	17-18m	20-23m
Maximum lots serviced	Secondary access only	12	100	NA
Width between kerbs[2]	3.5m	5.5m	7.3m – non perimeter road 8.0m - perimeter road 9.0m - bus route	11.0-14.0m

Traffic Lanes	1	Single shared carriageway	2	2 x 3.5m
On street parking	No	1m concrete parking indentations, 2 spaces every second lot frontage	Both sides, vehicles to yield as required	Dedicated indented parking lanes to AS2890.5
Nominal wearing course	Spray seal	Asphalt	Asphalt	Asphalt
Typical Kerb and gutter	Barrier	Layback[3]	Layback	Barrier
Typical Speed Environment	Low speed	Very low speed	Low speed	50-60 km/h Signposted
Bus route	No	No	Avoid	Yes
Footpath	No	Shared carriageway	Yes – 1.5m concrete	Yes – 1.5m concrete
Concrete Shared path/ Cycleway	No	No	As required – typically 2.5m[4]	Yes – typically 2.5m[4]
Typical Design Vehicle	5.3m (B99) Car	5.3m (B99) Car	5.3m (B99) Car	12.5m bus/truck
Typical Check Vehicle	8.8m Service Vehicle	10.5m Garbage Vehicle	10.5m Garbage Vehicle or 12.5m Bus if bus route	19m Semi Trailer

1. The use of the Residential Way is intended for specific situations, see guidance below.
2. Width measured between inverts for layback kerb and faces for barrier kerb. Perimeter road as required in bush fire prone areas per *Planning for Bush Fire Protection 2019.*
3. Layback is an acceptable solution. Vegetated swales with edge strips and 1-way crossfall allowable subject to stormwater design at Development Application stage.
4. In accordance with *Austroads Guide to Road Design* Part 6A.

Road Type: Residential Lane

A quiet, narrow street located behind residential properties for service access, paired with parallel residential streets. Caters for low traffic volumes in a very slow speed environment.

Objectives

- Provide secondary access to residential properties to facilitate lot servicing and increased residential density.
- Provide a standard for upgrading of existing laneways.

Guidelines

- A residential lane may be designed as a one-way access.
- Access from laneways will be considered on an individual basis.

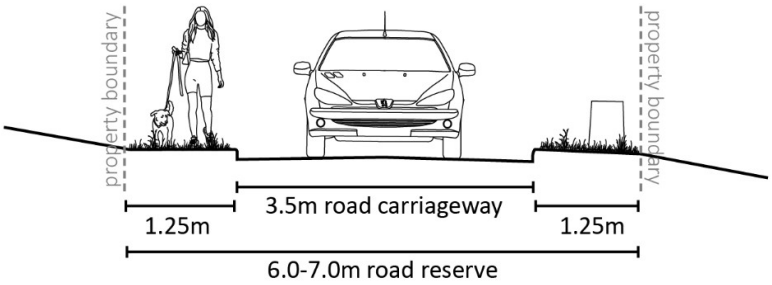


Figure x: Road cross section view of 'Residential Lane'

Road Type: Residential Way

A very quiet residential street inviting for people to spend time in, often with an informal layout and a sharing of spaces, and a low speed and volume of movement.

Objectives

- Facilitate higher subdivision lot yields and connectivity by providing a small, low volume street type that can be adapted to a range of situations.
- Ensure safer streets through a self-enforcing low speed environment.
- Maximise shade and moderate the impacts of wind through landscaping.
- Encourage Water Sensitive Urban Design.

Controls

1. Avoid use of Residential way in the following scenarios:
    a. in locations with existing high density or high potential for future densification, such as areas with a high proportion of multi-unit housing
    b. in steep environments
    c. where the street aligns with traffic movement desire lines
2. Incorporate entry treatments (such as painted or raised thresholds) at junctions to signal the changed character and low speed environment. Consult *NSW Design of Roads and Streets Manual to determine* appropriate treatments.

Guidelines

- Incorporate the planting of street trees into the verge and kerb extensions/blisters to moderate the impacts of wind and heat and narrow the perceived road carriageway.
- Not suitable for use as a perimeter road in bush fire prone areas.

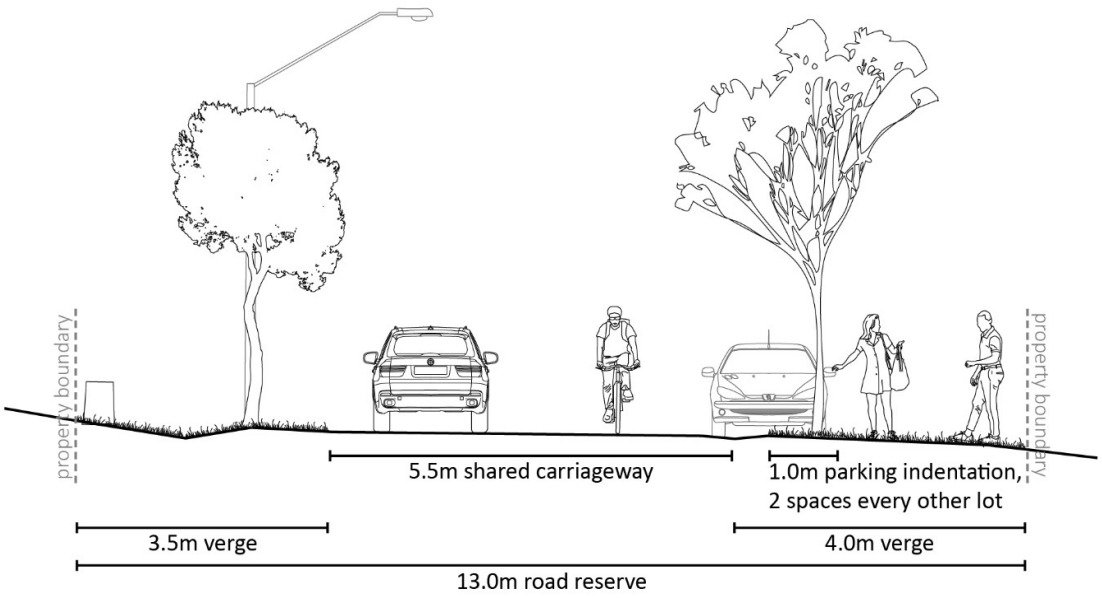


Figure x: Road cross section view of 'Residential Way'

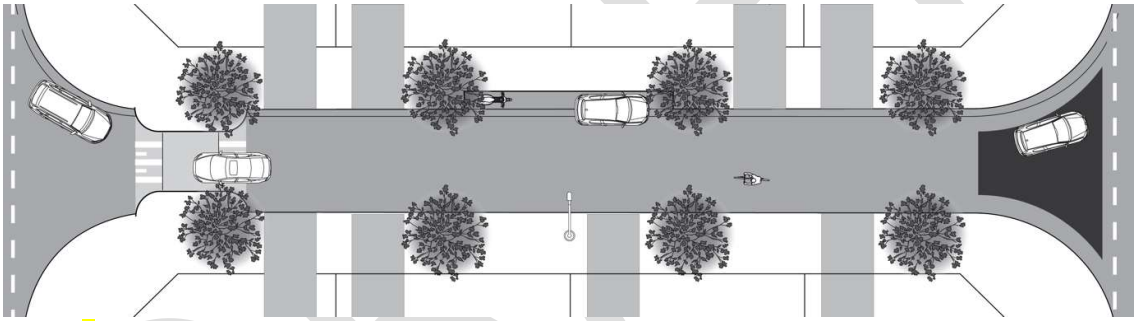


Figure x: Road plan view of 'Residential Way' with painted threshold (right) and slow point one car length in from threshold (left)

Road Type: Neighbourhood Street

A quiet residential street for people to spend time in an environment with a low speed and volume of movement.

Objectives

- Ensure safer streets for residents and encourage active transport.
- Maximise shade and moderate the impacts of wind through landscaping.
- Provide a low-maintenance local road that can be adapted for higher density development in the future.

Guidelines

- Neighbourhood streets are the most widely used and adaptable street type, forming the basis of connected street patterns. They are resilient to changes in network, volumes and land uses. When located at the bushland interface, it may also serve as a perimeter road for the purposes of *Planning for Bush Fire Protection 2019*.
- Avoid locating bus routes on neighbourhood streets wherever possible.

- Requires entry treatment at junctions to signal the changed character and slower speeds required. Consult Austroads Guide to Traffic Management Part 8: Local Street Management to determine appropriate treatments.
- Incorporate the planting of street trees into the verge and kerb extensions/blisters to moderate the impacts of wind and heat and narrow the perceived road carriageway.

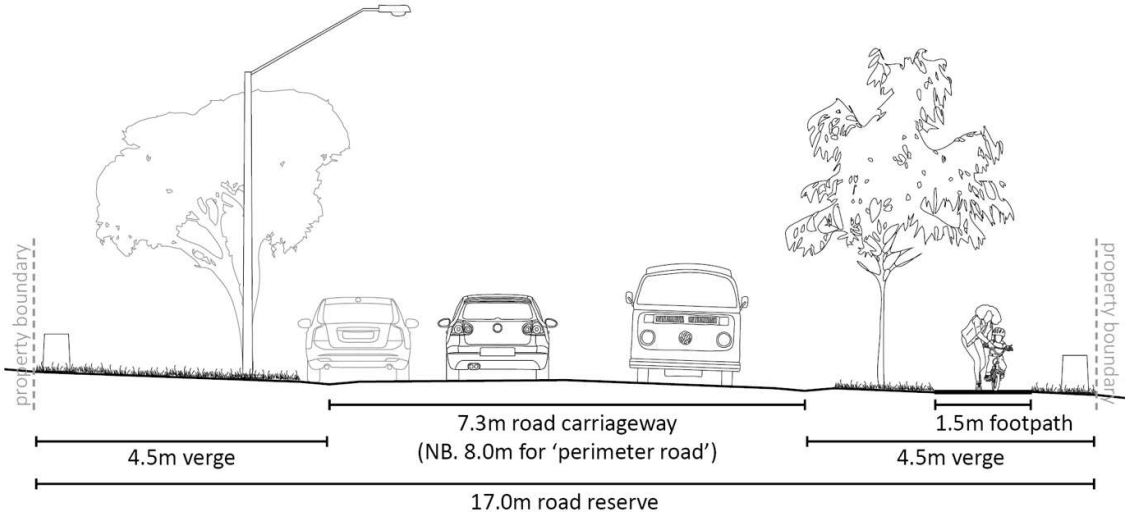


Figure x: Road cross section view of 'Neighbourhood Street'

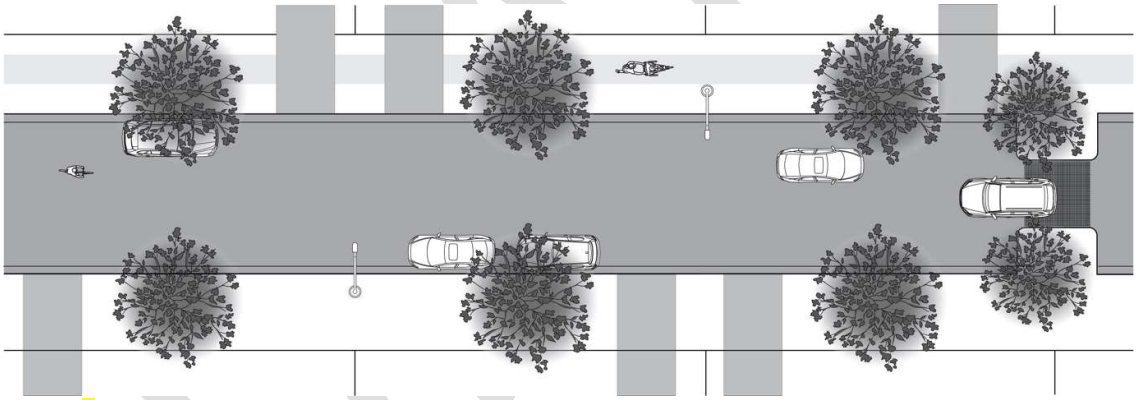


Figure x: Road plan view of 'Neighbourhood Street'

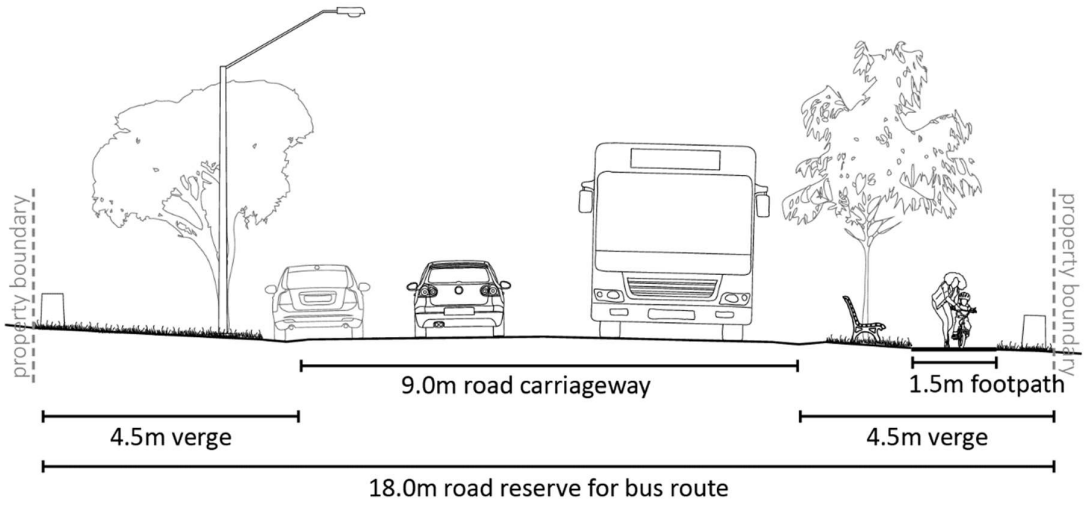


Figure x: Road cross section view of 'Neighbourhood Street' with bus route

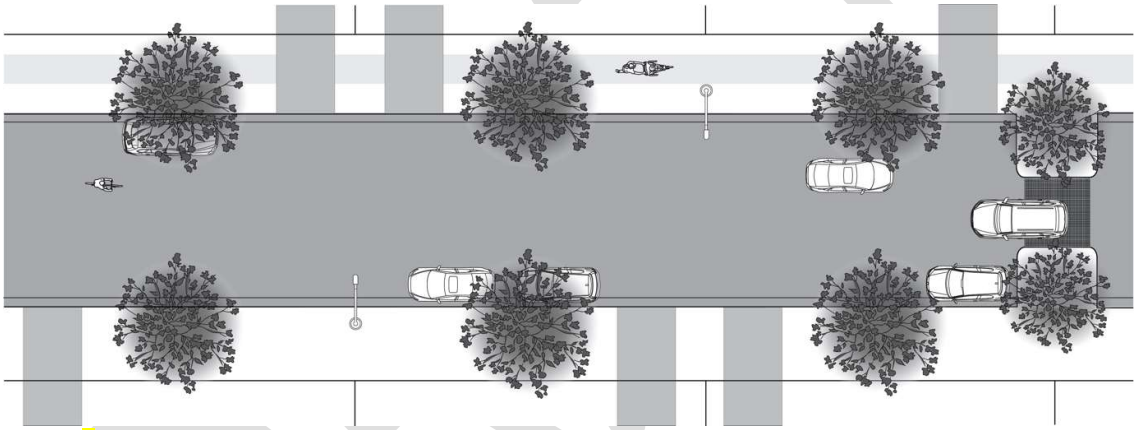


Figure x: Road plan view of 'Neighbourhood Street' with bus route

Road Type: Connector Street

Connector streets are two-way roads that link neighbourhoods and often include local bus routes. These streets connect residential areas to local destinations such as schools and town centres.

Objectives

- Establish a primary thoroughfare that connects to surrounding suburbs and centres.
- Connect to arterial and sub-arterial roads.
- Ensure safer streets for active transport and public transport.
- Maximise shade and moderate the impacts of wind through landscaping.

Guidelines

- To avoid the perception of a very wide carriageway which can contribute to higher vehicle speeds, at regular intervals extend kerb blisters into the parking lane to maximise tree canopy and narrow the perceived road corridor.
- Provide pedestrian treatments at roundabouts or road crossings where there is a desire line.

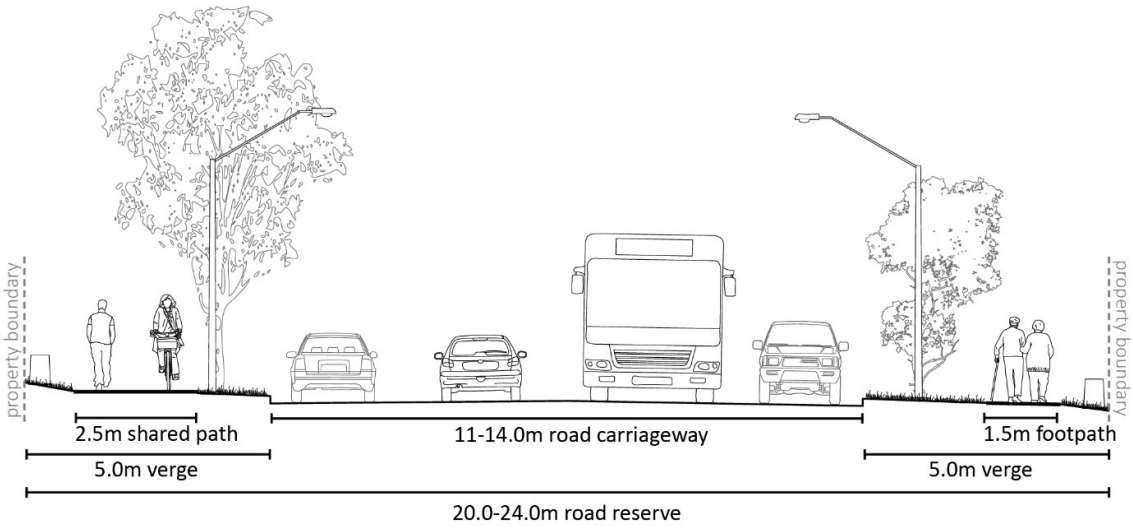


Figure x: Road cross section view of 'Connector Street'

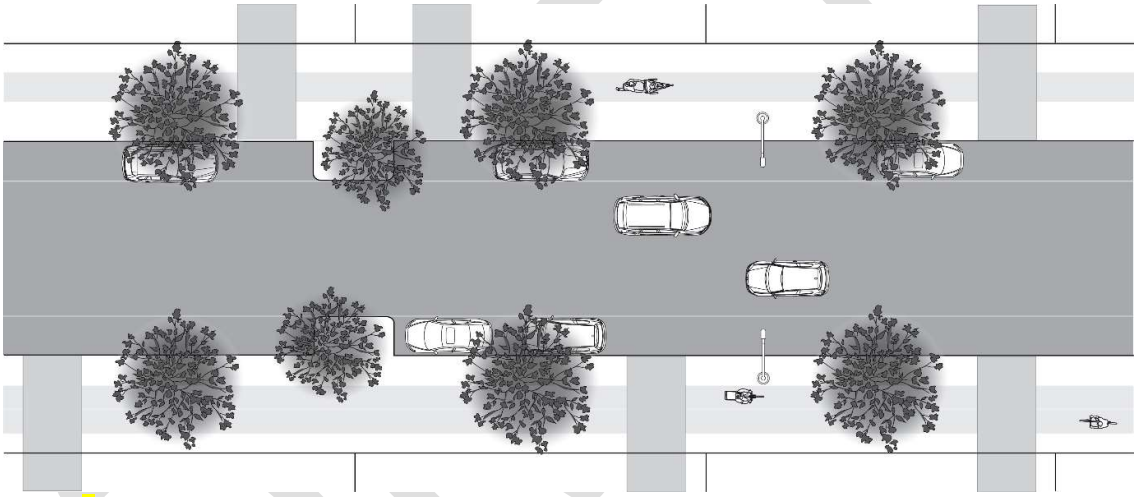


Figure x: Road plan view of 'Connector Street'

Rural and rural residential roads

Control

1. New roads in rural and rural residential subdivisions in zones R5, C3, C4, RU1, RU2 and RU4 shall be designed in accordance with *Table x: Rural Residential and Rural Roads.*

Guidelines

- See additional guidance under each road type below.
- In the Bega Valley Shire, State Classified Roads are typically considered arterial rural roads and Regional Classified Roads and rural roads connecting towns and villages are typically considered sub-arterial rural roads (referred to in this document as Rural link).
- Applicants are encouraged to undertake pre-DA consultation with Transport for NSW (TfNSW) if works involve State Classified Roads, as TfNSW is the Approval Authority for these roads.

Table x: Rural and Rural Residential Roads

Rural and Rural Residential Roads				
	Rural lane/ driveway	**Rural residential type 1**	**Rural residential type 2**	**Rural link**
Minimum width reserve/ easement[1]	≥10m Right of Access	≥20m Road Reserve		≥25m Road Reserve
Max posted speed limit	50 km/h	50 km/h	Conform to specifications	
Design AADT	<50	<500	<1000	≥1000
Traffic Lane Width	Comply with PBP 2019	2 x 3.0m	2 x 3.1m	2 x 3.5m
Shoulder width		0.5m[2] sealed	1.5m (0.5m sealed) one side	2.0m (1.0m sealed)
Nominal Wearing Course	Gravel[2]	Spray seal[3]	Spray Seal	Spray seal
Roadside drainage	Rural style table drains	Rural style table drains except on the high side of the road in sections of cut where concrete dish drains are required.		
Bus Route	No	If req	Yes	Yes
Cyclists/ Shared path	No	No	2.0m (1.5m sealed) shoulder on the other side for cyclists	Rural: Provide a cyclist envelope in sealed shoulder in accordance with figure x. Widen shoulder accordingly
Typical design vehicle	5.3m Car	10.5m Garbage vehicle	12.5m Bus	19m semi-trailer
Typical check vehicle	10.5m Garbage Vehicle	12.5m Bus	12.5m Bus	26m B-double

1. Widths specified are minimums. The reserve/ easement must contain the formation, drainage and any approved batters steeper than 4H:1V.
2. Required to be sealed:
    a. When any sections of grade are greater than 15% for public roads or 17.6% (10 degrees) for property access,
    b. Near sensitive receiving waters,
    c. When the road will be close to sensitive receivers and there could be dust impact,
    d. To close any existing gaps in the seal or gaps created by the above requirements, which are less than 500m.
3. Gravel is permitted for upgrade of existing gravel roads with post development Annual Average Daily Traffic (AADT) <200 VPDs, unless sealing is required for environmental reasons, where the grade exceeds 15% or in RU5 village zones.

Road Type: Rural lane

A rural lane servicing a small number of properties and can cover long distances. In general, rural lanes are contained within private property and legal access is via right of access.

Objective

- Minimise adverse impacts to the natural environment and preserve natural habitats and biodiversity, while ensuring safe access and egress for residents and emergency vehicles.

Guidelines

- Generally, a 3.0m vehicle lane with 0.5m shoulders. Road carriageway width may need to be varied to comply with *Planning for Bush Fire Protection 2019*.

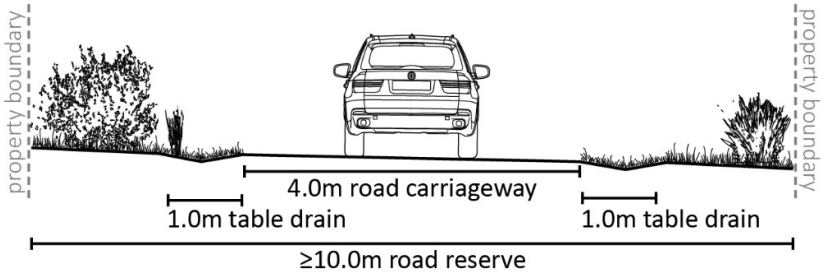


Figure x: Road cross section view of 'Rural Lane'

Road Type: Rural Residential 1 and 2

This is the main type of public road for providing access within rural residential and certain village areas. This type of road blends rural living with necessary transportation routes.

Rural Residential 1 is suitable for a low speed, low volume local area that isn't a thoroughfare.

Rural Residential 2 connects local areas to rural links and arterial roads while providing access to residential properties along its length.

Objectives

- Ensure safe public access to rural residential areas, including for active travel.
- Minimise adverse impacts to the natural environment and preserve natural habitats and biodiversity.

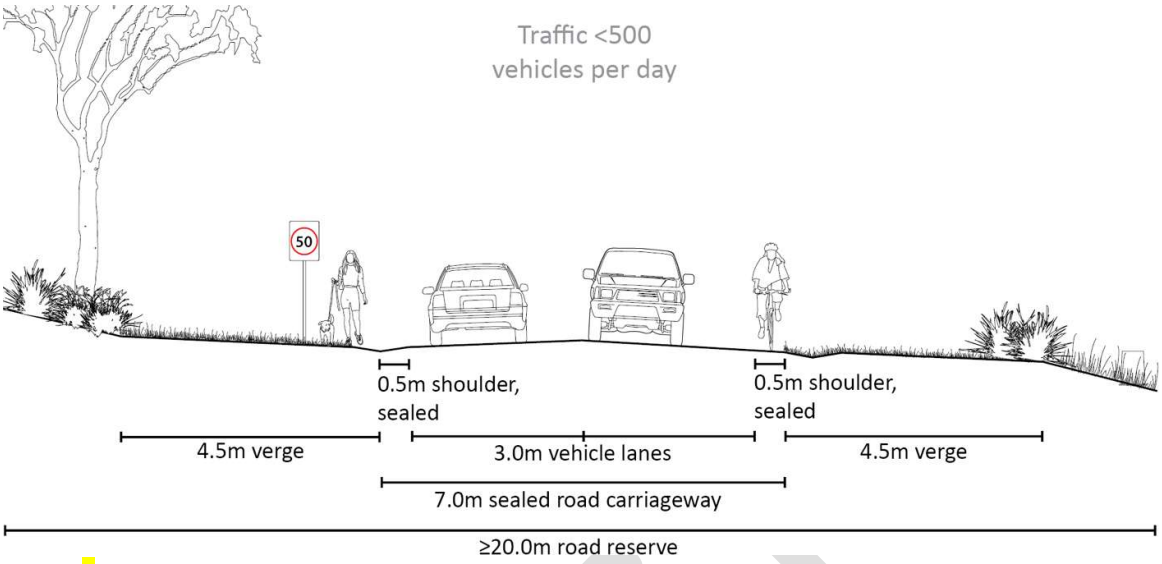


Figure x: Road cross section view of 'Rural Residential Type 1'

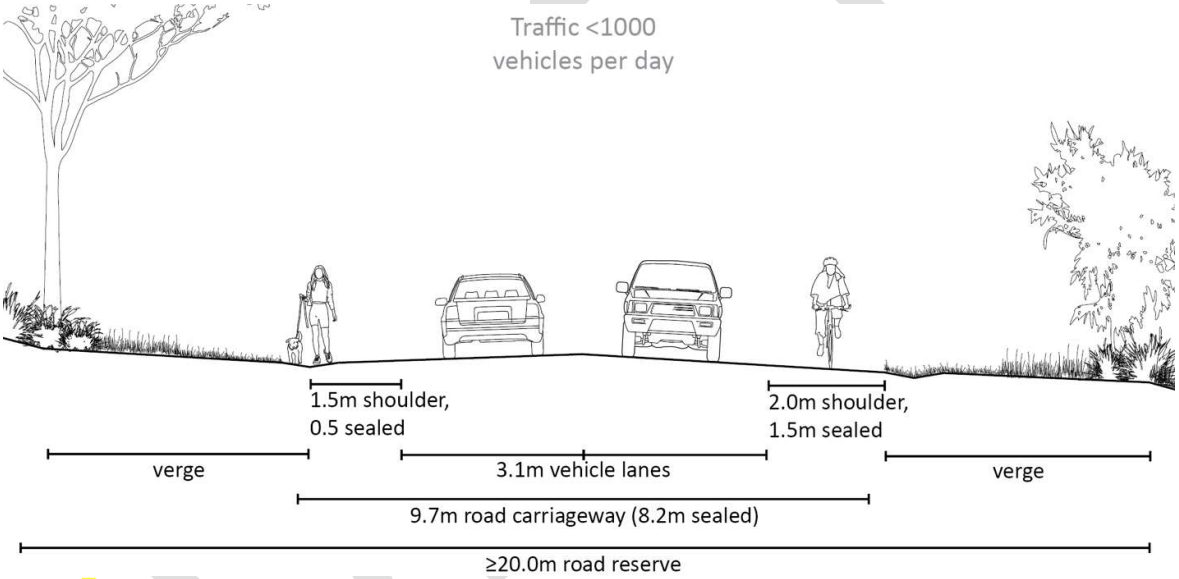


Figure x: Road cross section view of 'Rural Residential Type 2'

Road Type: Rural link (also referred to as sub-arterial)

A rural link road provides connectivity between towns and villages, blending rural living with necessary transportation routes. It can allow for an on-road cycleway, promoting active transport and ensuring safe and efficient travel for all road users.

Objectives

- Ensure connectivity between towns and villages.
- Ensure road design enhances safety for all users, including active travel and motorists.
- Support use of Rural links as scenic routes.
- Retain existing native vegetation in road verges, where possible.

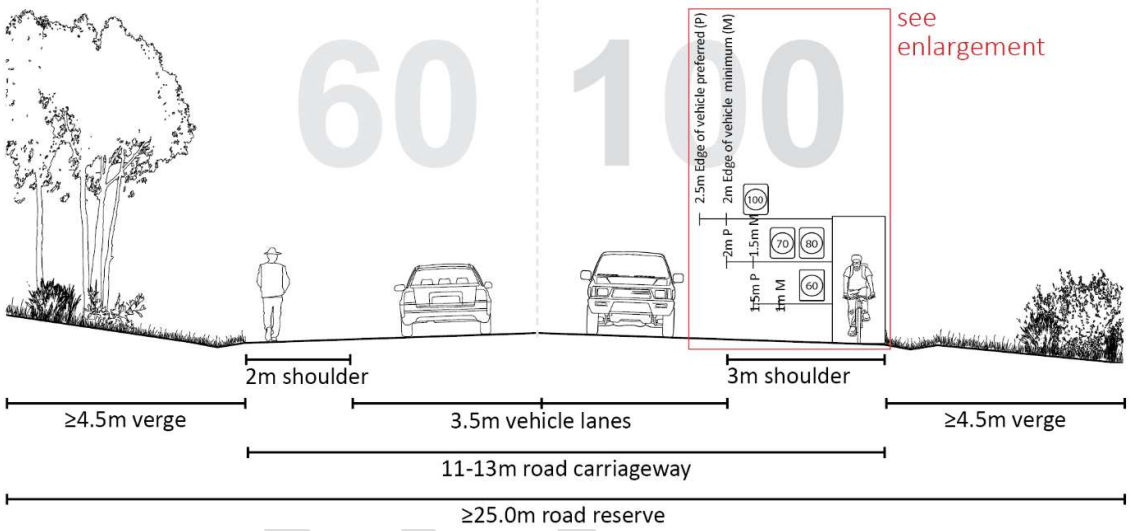


Figure x: Road cross section view of 'Rural Link' in rural areas with on-road cycleway (see enlargement of cyclist envelope below)

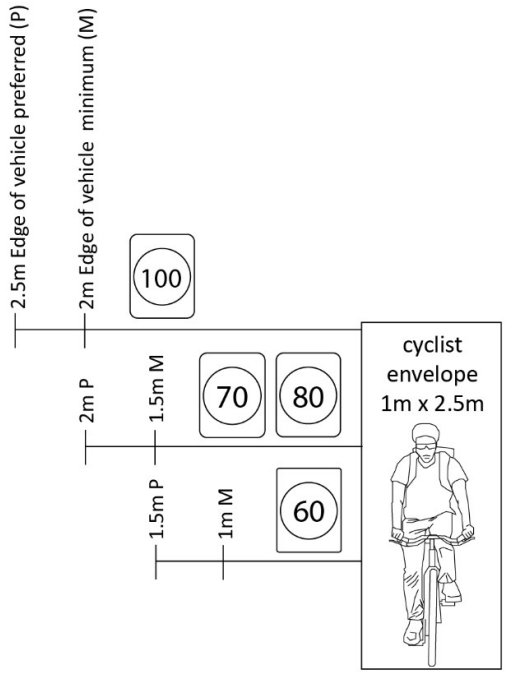


Figure x: Cyclist envelope (enlarged image)

Commercial and industrial

Control

1. New roads in commercial and industrial subdivisions in zones E1, E2, E3, E4, E5 and MU1 shall be designed in accordance with *Table x: Commercial and industrial Roads.*

Guidelines

- See additional guidance under each road type below.

Table x: Commercial and industrial roads

Commercial and industrial roads		
	Enterprise street	**Commercial lane**
Minimum width of road reserve	21m	8m if new 6m if existing
Width between Kerbs	12m	4m
Traffic Lane	2 x 3.5m	4m
On-street parking	2 x 2.5m	No
Nominal Wearing Course	Asphalt	Asphalt
Kerb type	Barrier	Barrier
Path	1.5m footpath if road is not a thoroughfare 2.5m shared path where the road is a thoroughfare	No
Typical design vehicle	19m Articulated	5.3m (B99) Car
Typical check vehicle	26m B-Double	8.8m Service Vehicle

Road Type: Enterprise street

A street that serves industrial and commercial areas, catering to people who work in the areas as well as those who deliver freight and servicing.

Objectives

- Ensure industrial and commercial streets provide efficient access for freight and service vehicles.
- Ensure enterprise streets minimise the intrusion of heavy vehicles into adjacent non-commercial areas.
- Prioritise the safety and efficiency of all road users including active transport, through thoughtful design, appropriate signage, and traffic management strategies.

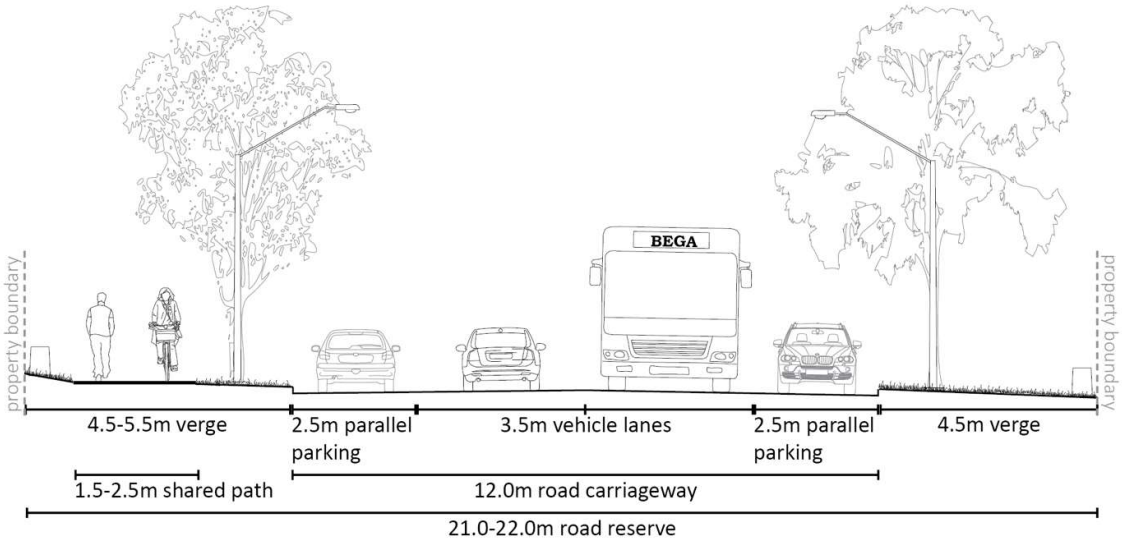


Figure x: Road cross section view of 'Enterprise Street'

Road Type: Commercial lane

A narrow street aligned to the rear of mixed-use properties to provide service access and facilitate the provision of continuous active frontages on parallel streets.

Objectives

- Provide for a one-way, low speed environment to service commercial uses.
- Make commercial streets safer and more enjoyable for walking and cycling by removing the need for driveway crossovers.

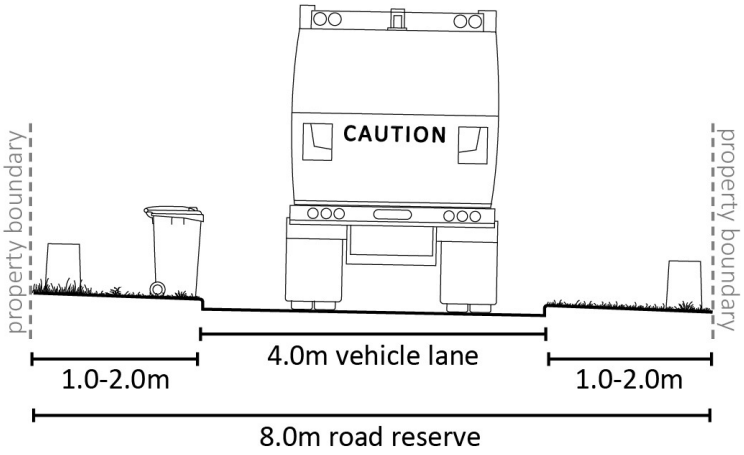


Figure x: Road cross section view of 'Commercial Lane'

Urban subdivisions

Application

This section provides additional specific planning controls for residential subdivisions of land in residential areas serviced with reticulated water and sewerage infrastructure, including zone R2 Low Density Residential, zone R3 Medium Density Residential and some RU5 Village zones.

Layout and design

Responding to slope

The likely lifespan of subdivision layouts being 100 years or more means it is essential that subdivision layouts are optimised. Subdivision design is an iterative process that will be subject to ongoing refinement through the design and assessment process. Slope needs to be considered with due regard to achievable access grades, lot size, solar access and yields.

Objectives

- Ensure the layout of new subdivisions reinforces the natural topography, limits significant earthworks and minimises the need for retaining structures.
- Ensure new lots have appropriate dimensions in relation to the slope of the land.
- Locate paths to maximise accessibility.

Controls

1. New subdivision development on land with slopes greater than 10% shall be supported with a Slope Management Plan. See Guidelines for detailed inclusions.

Guidelines

- The Slope Management Plan will demonstrate how the subdivision responds to the site's topography, and will include:
    - A site description and design response that includes: a site plan detailing the predevelopment slope gradients in intervals of 5% (i.e., 0-5%, 5-10%, 10-15% etc.); and an explanation of how the design responds to the slope gradients, natural features and future neighbourhood character.
    - Road and lot layout that demonstrates achievable building pads and access grades, with retaining walls on private land distributed so that heights are limited to 1m in any single rise, with a minimum 0.5m setback from lot boundaries.
    - A geotechnical report addressing existing site conditions and confirming the suitability of the site for the proposed development, including assessment of the risk of subsidence or landslip.
    - Details of all proposed batters, cut and fill earthworks, driveway and crossover locations, and drainage solutions required for land with existing predevelopment slope of greater than 10%.
    - Details of any proposed retaining walls, including overall height, staggering of retaining walls, finished levels, construction materials and associated fencing.
    - Details of any proposed retained vegetation.

Figure x: Desirable and undesirable site regrading

Table x: Slope gradients by percentage, ratio and degrees

Upper Gradient of Slope (%)	***Upper Gradient of Slope (Ratio)***	***Upper Gradient of Slope (Degrees)***	***Description***
5%	1:20	2.8	Flat
10%	1:10	5.7	Moderate
15%	1:6.6	8.6	Steep
20%	1:5	11.3	Very Steep
25%	1:4	14	Extremely Steep
30%	1:3.3	16.9	

Orientation and solar access

Objective

- Ensure new residential lots support and encourage passive solar house design.

Controls

1. Design new streets to align within 15 degrees of solar north or east, wherever possible.
2. Where a northerly or easterly orientation of new streets is not possible align lot side boundaries north-south and east-west with an angled front boundary to the street. See figure x.

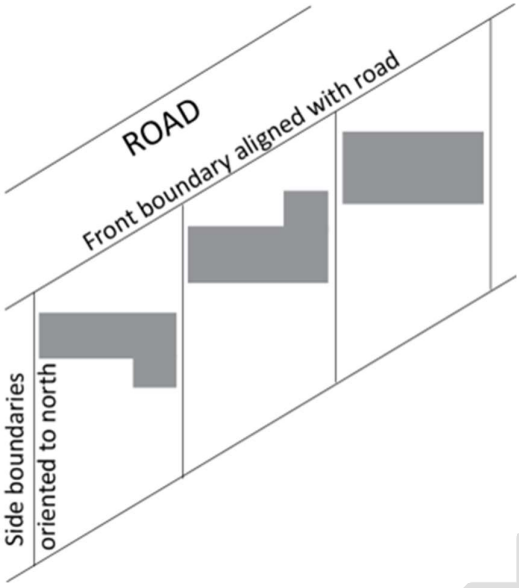


Figure x: Lots oriented north-south on an angled street, with dwellings aligned to side boundaries

3. Align the boundaries of new residential lots within 15 degrees of solar north or east.
4. Design new lots on east-west aligned streets to enable the long side of the house oriented to north to support passive solar house design (see figure x).

   Note: In summer, neighbouring houses can provide protection from low east and west sun.

5. Design new lots on north-south aligned streets to be wide enough to prevent significant winter overshadowing from dwellings on adjacent lots to the north (see figure x).

   Note: In summer, these dwellings will be exposed to low east and west sun and will require additional shading.

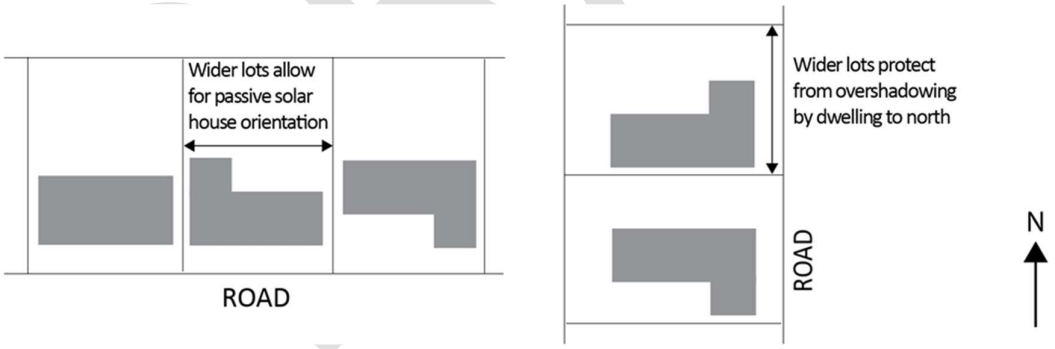


Figure x: Wide lots on north- and east-aligned streets providing improved solar access

6. New lots on south facing slopes shall demonstrate that living areas of future dwellings and an area of private open space can achieve at least 3 hours of solar access at the winter solstice.
7. For greenfield subdivisions, the use of battle axe lots is not desirable and shall be minimised.
8. Table x sets out minimum lot dimensions for new lots.

Table x: Minimum lot dimensions in R2, R3 and RU5 zones

Allotment type		R2	R3	R2 and RU5 without Sewerage	RU5 zoned villages with Sewerage
Corner allotments	Minimum boundary width	15m	25m	-	-
Battle axe allotments	Minimum width at building site (and effluent disposal area if applicable)	20m	-	30m	20m
Other allotments	Minimum width at building line (and effluent disposal area if applicable)	15m	-	30m	15m
	Minimum depth	25m	-	-	25m
Small lots (lots between 350-550sqm)	Minimum width at building line	12.6m	-	-	-
	Minimum depth	25m	-	-	-

Guidelines

- Solar passive house design orients dwellings for warming in winter and cooling in summer by maximising northern exposure of walls and windows for winter sun, while blocking solar access with eaves and shading in summer. Dwellings oriented in this way are less expensive to heat and cool and can reduce construction costs when building to 7 stars and beyond.

  See https://www.yourhome.gov.au/passive-design for detailed guidance on passive solar house design.

- The following provides guidance on the design of new urban streets and lots that can support passive solar house design, with consideration of slope and aspect.

Flat land

- Optimise yields by integrating smaller lots on the northern side of streets where both living areas and private open space can receive good solar access (see figure x).

North-sloping land

- North-sloping land is ideal for higher housing densities without compromising solar access.
- North-sloping land can better accommodate east-west oriented lots with less risk of overshadowing from dwellings to the north.
- East-west oriented lots on north-sloping land can better provide for private open space along the same contour as the dwelling.

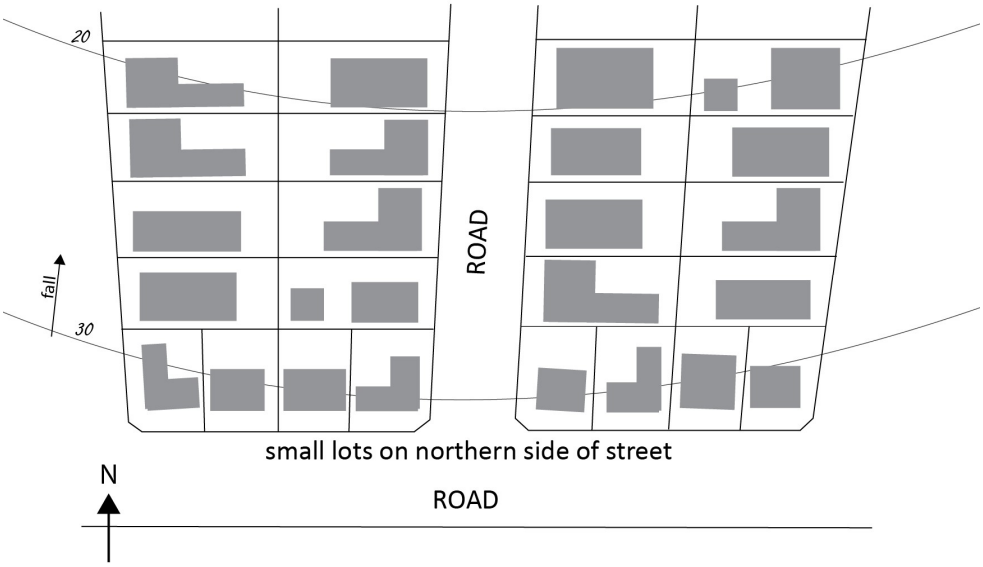


Figure x: example subdivision pattern for north-sloping land

East and west-sloping land

- On north-south aligned streets, provide wider lot frontages to minimise required cut and fill at the dwelling construction stage, and allow for private open space at the same level as the dwelling.
- Retain housing density by making lots squarer.
- Optimise yields by integrating smaller lots on the northern side of roads (ensuring adequate space for changes in levels).

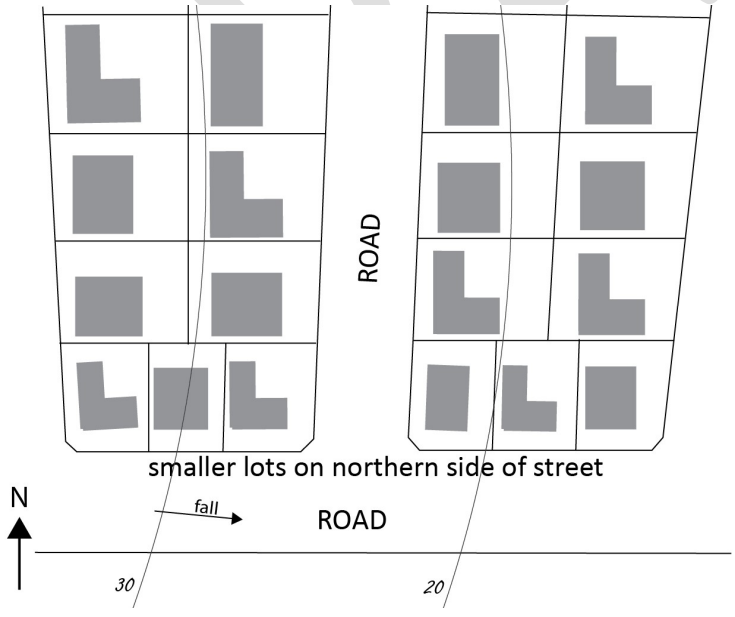


Figure x: example subdivision pattern for east and west sloping land

South-sloping land

- Provide larger square-shaped lots to protect against overshadowing from uphill.

- Small lots are not suitable on south-sloping land.

Figure x: example subdivision pattern for south sloping land

Integrating housing diversity

Objectives

- Use land and infrastructure efficiently while protecting neighbourhood character.
- Provide opportunities for housing diversity.

Controls

1. Subdivision design must incorporate a range of lot sizes that reflect the diversity of residential land uses that are able to be undertaken in the zone.
2. Where multi dwelling housing and/or residential flat buildings are permitted in the zone, land subdivisions of 1ha or more will create larger development lots of no less than 2,000sqm to cater for these land uses. Development lots for multi dwelling housing and/or residential flat buildings shall be: sited on land suitable for multi dwelling housing in relation to slope and sunlight access; provided with two-street access with feasible internal connectivity; and serviced with adequate electricity, telecommunications, water, sewerage and stormwater drainage infrastructure in accordance with a theoretical yield of 1 dwelling per 200sqm.
3. New development lots for multi dwelling housing and/or residential flat buildings will have a covenant placed on the title identifying the land as a development lot for the purposes of this part and restricting development on the land to multi dwelling housing or residential flat buildings, as permitted in the zone.
4. Subdivision development yields shall respond to the site constraints, in particular slope and solar access, however, as a guide the densities detailed in Table x are desirable.

   Note: *The provision of development lots may be necessary to achieve the target density for the zone.*

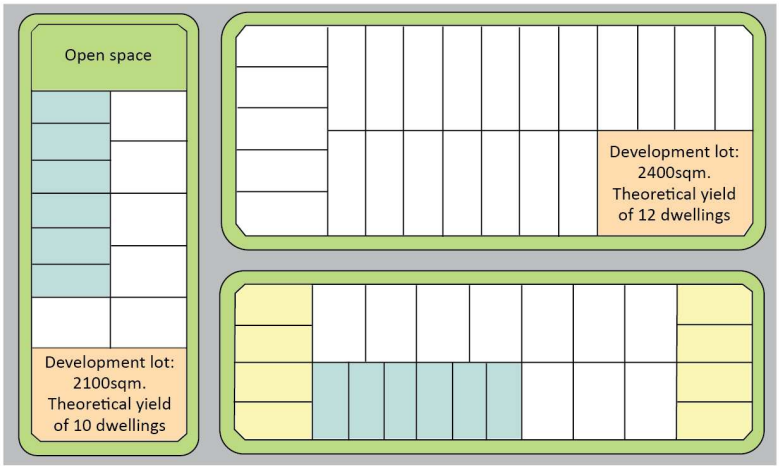
Table x: Desirable minimum dwelling density targets by zone

Zone	Target Density (dwellings per hectare)

R2 Low Density Residential	15
R3 Medium Density Residential	35
RU5 Village	10

Note: *For the purpose of calculating the anticipated dwellings per hectare density:*

- *lots smaller than 2,000sqm will be counted as one dwelling.*
- *development lots shall use a theoretical yield of 1 dwelling per 200sqm.*



Plan colour	Lot dimensions	Lot type	Lot Yield	Dwelling Yield (theoretical)
	30 x 13.3m	small lot (399sqm)	12	12
	30 x 15m	small lot (450sqm)	8	8
	variable	development lot	2	22
	30 x 20m	standard	16	16
	40 x 15.5m	standard	23	23
			61	**81**

Study Boundary	Density
5.25ha (excl. open space)	15.4 dwellings/ha

Figure x: Example – calculating site density

Integrating small lots

Note: For the purposes of this section, small lots are residential lots smaller than the mapped minimum lot size.

Objectives

- Use land and infrastructure efficiently to achieve desired subdivision yields while preserving natural features.
- Provide opportunities for housing diversity.

Controls

1. Locate small lots on the northern side of east-west oriented streets, with the long axis aligned north-south to ensure the living areas and private open space receive good solar access to the north.
2. When locating small lots on north-south streets with the long axis aligned east-west, make lots wider to protect from overshadowing from the north.
3. Small lots shall be interspersed through larger lots to minimise potential for parking congestion and reduce the impact of driveways on streetscape. The maximum number of small lots in a cluster is six (in the same street) with a minimum 50m gap before the next cluster of small lots. Lots may be clustered in groups of more than six where located opposite open space.
4. Small lots between 350-450 sqm shall be located close to areas of high amenity such as open space, shops or public transport, where such services are available.
5. Location of small lots in cul-de-sac bulbs or on land steeper than 10% is not acceptable.

Guidelines

- The natural features of Bega Valley Shire, including undulating topography, rock outcrops, biodiversity and hazards, means that greater flexibility around lot sizes is required to preserve natural features while achieving desired subdivision yields. Additionally, demographic trends indicate an ageing population with the need for smaller, lower-maintenance lots, along with an identified need for more affordable entry-level opportunities for young families. Responding to these drivers, the *Bega Valley Local Environmental Plan 2013* permits the integration of vacant lots smaller than the minimum lot size in some areas.
- Locate small lots on east-, west-, and north-facing land with less than 10% slope to minimise the need for retaining walls and maximise solar access.
- Locate small lots in areas of high amenity including open space, services and good views.
- Small lots can be front loaded or rear loaded (from a laneway).
- Services and easements are better located on larger lots.

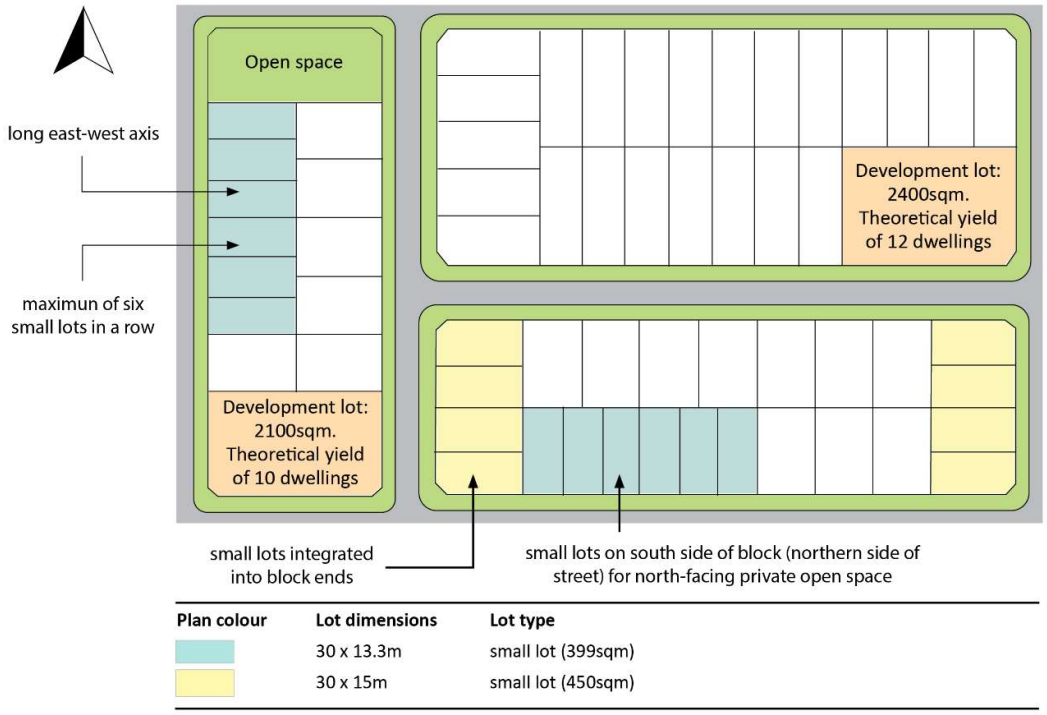


Figure x : Example – integrating small lots

Vehicular Access

Objective

- Ensure legal, safe and efficient vehicular access between roads and lots.

Control

1. Each lot must demonstrate legal and practical access to a public road.
2. Access will be from the street with the lowest traffic volume. Direct access from a State or Regional classified road is not permitted where access is achievable via an alternative road, laneway or easement.
3. Where the speed environment is greater than or equal to 70 km/h, new greenfield lots will be provided with vehicular access from a secondary rear street or service/frontage road or shared driveways.
4. The formation of driveway crossovers and full-length driveways is required at the subdivision stage for all battle axe lots or where a right of access is proposed.
5. Batters and retaining structures must be contained within the right of access. Minimum widths must be increased where necessary to accommodate these.
6. All new rights of carriageways or rights of access servicing 3 or more allotments will be named as part of the subdivision and referred to as lanes in accordance with Council's Road naming policy and its amendments.
7. Section 88B instruments must specify maintenance responsibilities for burdened and benefited lots.
8. New subdivisions accessing onto roads with a speed limit greater than or equal to 70 km/h shall be designed with a single access point. Existing crossovers must be consolidated into the single access point.
9. Servicing controls for battle axe handles and rights of access are provided in the table below.

Table x: Servicing controls for battle axe handles and rights of access

	Battle axe handle	Right of access
Maximum lots serviced	1	4
Minimum internal driveway width[1]	3m	4m
Minimum right of access/ handle width	driveway width + 1m[note2]	4m +1m per lot
Pavement – R2 and R3 zones	Concrete	
Pavement – R5 and RU5	Gravel with spray seal or concrete	

1. In addition to the minimum dimensions, comply with the requirements of AS2890.1
2. Where a battle axe driveway continues into a right of access, the minimum width of the battle axe handle = driveway width + 1m per lot serviced

Guidelines

- The design of new access roads and driveways shall generally comply with:
  - *Planning for Bush Fire Protection 2019*
  - Council's Specifications
  - Council's standard drawings for driveways including permissible grading
  - AS2890.1 Parking Facilities, Part 1: Off-street car parking
- Access from a State Classified Road is subject to approval from Transport for NSW.
- For road classifications, refer to Transport for NSW's Schedule of Classified Roads and Unclassified Regional Roads.

Connectivity and accessibility

Objectives

- Enhance connectivity and legibility within and between residential neighbourhoods by providing safe, direct, accessible and convenient neighbourhood street infrastructure for active travel, public transport users and motorists.

Controls

1. Subdivision design must provide for an overall transport movement hierarchy showing the major circulation routes and connections to achieve a simple and safe movement system for private vehicles, public transport, and active travel.
2. Subdivision design will ensure a highly connected local street system, such as a grid, that provides for a walkable neighbourhood and allows movement within and between neighbourhoods without local road users being forced to use the surrounding arterial road system.
   Council will not support subdivisions featuring cul-de-sac street layouts or non-connecting circuits, except where a cul-de-sac will result in higher lot yields and vehicular connectivity is not possible nor likely to be possible in the future.
3. Where Council does permit a cul-de-sac or non-connecting circuit adjacent a public reserve or an arterial or sub-arterial road, connectivity for active travel shall be provided.
4. In greenfield subdivisions, the design will nominate a bus route.
5. New bus stops will provide seating, and rain and sun protection, for at least 4 people.
6. New footpaths must provide continuity and connectivity by linking to existing networks, be accessible for people of all abilities and provide the most practical and direct route to nearby services and facilities, such as parks, schools and shops.
7. Public seating, co-located with shade, will be provided in association with footpaths along:

- Connector streets,
- Neighbourhood streets longer than 400m without bus stop seating, and
- streets close to schools and aged care facilities. Distances between public seating shall be at practical intervals that responds to the topography, based on the following:
    - Flat (0-5% slope) - 350m
    - Moderate (6-10% slope) - 250m
    - Steep (11-15% slope) - 150m
    - Very steep (16-20% slope) - 100m

8. Greenfield subdivisions must provide safe and accessible crossings for streets and roads, including the installation of necessary traffic controls and kerb ramps.
9. Footpaths must be located in areas of high passive surveillance from adjacent streets and dwellings and serviced with street lighting in accordance with Council's Street lighting policy and procedure.

Guidelines

- A walkable neighbourhood is one that promotes an active and healthy lifestyle by encouraging walking and cycling within walkable distances, including for people of different ages and abilities and those with impaired mobility, through the provision of direct, comfortable and accessible active transport infrastructure, that is safe to use through the day and night.
- Walkable neighbourhoods give preference to connected, local grid networks as they facilitate the shortest path of travel and thereby promote walking and enhance accessibility for non-motorists.
- Walkable neighbourhoods generally have residential blocks with their long dimension less than 200m, and a total perimeter less than 550m, allowing pedestrians to easily move between streets without having to walk long distances. Consider providing additional through-site links for pedestrians every 130m in areas close to town centres or schools.

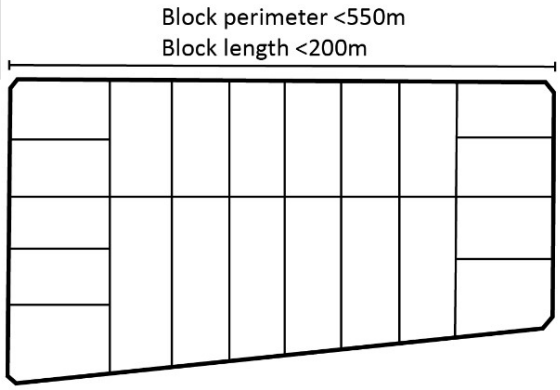


Figure x: Maximum desirable dimensions of residential blocks in walkable neighbourhoods

- Support wayfinding by providing clear sightlines to place features such as waterways, public open spaces, landmarks and town centres.
- Minimise road crossing distances for pedestrians to enhance safety and convenience.
- Applicants must consult with local bus operators in the initial planning of greenfield subdivisions.

- The guidelines and specifications for design and construction of public infrastructure as part of development are set out in the following:
    - Council Development Engineering Guidelines
    - Council Development Design Specification
    - Council Development Construction Specification

Small-scale infill subdivisions

Application

This section provides additional specific planning controls for small-scale infill subdivisions.

Objectives

- Make efficient use of spare capacity in existing infrastructure.
- Encourage development that raises living standards and quality of life by focusing growth in well-located areas.
- Mitigate and manage the impacts of increased density on residents.

Control

1. Subdivisions of land in existing urban areas must take account of the pattern of surrounding development so that the resulting development is respectful of its surroundings. Consideration must be given to mitigating overlooking, overshadowing, and potential noise impacts.
2. In any subdivision of a multiple dwelling development, each lot or strata dwelling lot must have suitable legal and practical access, separate water, sewerage, drainage, electricity and telecommunications services and car parking spaces.
3. Where land containing buildings is subdivided, the subdivision must be designed so that the relationships between buildings and boundaries conform to all relevant provisions of the Building Code of Australia. Particular attention is required to setback distances from boundaries and fire resistance ratings of building elements within 3m of boundaries.
4. Upgrades to existing roads fronting the development are to be in accordance with Table x and Figure x in *Section x Road Hierarchies*.
5. Where Crown Roads form part of the subdivision, see *5.16 Crown roads*.

Guidelines

- Infill subdivision design must consider the capacity of existing infrastructure. It is recommended to make enquiries early in the design stage about sewer, water, stormwater, electricity and access availability and capacity.
- Choose locations well-served by existing infrastructure to lower development costs.
- Consider whether high value trees can practically be retained.

Open space and amenities

Objectives

- New greenfield subdivisions contribute to a network of green spaces to cultivate healthier and more liveable towns and villages.
- New greenfield subdivisions are adequately supplied with local parks.

Controls

1. Where land is identified in a Master Plan, Structure Plan, or Council Strategy as requiring the dedication of open space, the development shall provide for the open space accordingly.
2. For land not identified in Control 1, subdivisions of land larger than 1ha shall provide an assessment of existing open space against the benchmarks described in the guidelines below. Where existing open space provision is found to be inadequate for the anticipated additional population, the development shall provide open space in the form of a local park in accordance with the benchmarks.
3. Land dedicated for a local park shall be:
    a. free of hazards and constraints to community use, including free of constructed drains and overland flow paths, and vegetation that would present as a bush fire hazard, located to ensure continuous passive surveillance and accessibility (i.e., minimum 50% road frontage or combined road and public use area such as a retail precinct),
    b. centrally located within the neighbourhood or connected to the existing open space network, and
    c. of flat to moderate slope (0-10%).
4. Local parks may be complemented with linear parks or open space corridors, however linear parks are not a substitute for meeting local park benchmarks.
   Linear parks or open space corridors adjacent to a waterway must be located on flat to moderately sloping land (1-10%) with a minimum width of 20m from the top of the bank.
5. Council will only accept dedications of land for open space where there is a demonstrated need in accordance with the benchmarks that is not already met by existing public parks and open space, including district and regional parks. Where there is a demonstrated need for open space, the proposed recreational uses and any associated installation of facilities or equipment shall be negotiated with Council, in accordance with the *Draft Greener Places Design Guide* or its update and any relevant Council strategies or policies.
6. Open space areas shall be connected to the existing active transport network of footpaths or shared paths.
7. Any new public open space must be highly accessible and visible from the street, where possible providing a minimum 50% road frontage, and provide functional spaces for informal recreation activities.
8. Local parks will be serviced with at least two accessible car parking spaces, public seating, bins, lighting, electricity and a water and sewer connection, or alternatively to the agreement of Council.
9. Where the provision of new amenities is agreed with Council, including seating, toilet blocks, shared paths and playground equipment, they will be located for maximum exposure and accessibility.
10. Incorporate natural hazard buffer areas into public open space/natural areas.

Guidelines

- Local parks provide places and facilities for recreation activities and local community activities. Refer to guidance in *Draft Greener Places Design Guide*.
- The capacity threshold for existing local parks is 1,500 persons per 5000 sqm within 500m walking distance. (*Draft Greener Places Design Guide)*.
- Generally accepted benchmarks for new local parks in greenfield subdivisions (*Draft Greener Places Design Guide*) provide for:
    - 1 park per 1,000-1,500 persons,
    - minimum size of 5,000 sqm,

    - 90% of the dwellings it serves within 400m walking distance without any significant access barriers (e.g., highways).
- Public places should be sited and designed to attract people of all ages and abilities, providing opportunities for socialisation and participation in active and healthy lifestyles.
- The desirable outcome for greenfield subdivisions is to base the public open space framework around natural systems. Natural systems include ridge lines, bushland corridors, waterways, foreshores, and important natural areas. Siting of open space adjacent to natural systems provides the additional benefit of providing a bush fire buffer between the hazard and dwellings.

Servicing standards

Objective

- New lots will be serviced and ready to build on.

Electricity, telecommunications and street lighting

Objective

- Ensure residential subdivisions are appropriately serviced and can be adapted to future technological advancements.

Controls

1. Each lot in a residential subdivision will be separately serviced with:
    a. underground electricity, and
    b. fibre-ready facilities and fixed-line telecommunications infrastructure in the fibre-ready facilities, all at no cost to Council.
2. Street lighting shall be provided in accordance with Council's Street lighting policy and procedure.
3. Electricity substations and telecommunications service multiplexers will be located within suitable easements and will not be located within public road reserves.

Guidelines

- Street lighting shall use only basic standard poles and light fittings maintained by the local electricity authority.
- Exemptions from pit and pipe requirements may be available under the *Telecommunications Act 1997* in certain circumstances. For details, visit the Department of Infrastructure, Transport, Regional Development and Communications' website.

Village subdivisions

Application

This section provides additional specific planning controls for residential subdivisions of land zoned RU5 Village in villages that are not serviced with reticulated water and sewerage infrastructure.

Lot layout and vehicular access

Objectives

- Ensure that the design and layout of unsewered village subdivisions supports the practical use and management of land, while minimising impacts on natural resources and biodiversity, and protecting public and environmental health.
- Ensure legal, safe and efficient vehicular access between roads and lots.

Controls

1. The capacity of the site to provide sustainable on-site wastewater management must primarily inform the subdivision design. Proposed lot configurations, yields, building pads and associated effluent disposal areas shall be informed by a Land Capability Assessment Report by a qualified and experienced engineer, in accordance with *5.7 On-site wastewater management.*
2. For greenfield subdivisions, the use of battle axe lots is not desirable and shall be minimised. Where there is no other practical alternative to use of a battle axe lot, battle axe lots must be designed to allow suitable separation between dwellings to provide reasonable residential amenity, privacy and solar access.
3. Lot dimensions shall comply with Table x: Minimum lot dimensions in R2, R3 and RU5 zones.
4. Subdivisions of land in existing urban areas must take account of the pattern of surrounding development so that the resulting development is respectful of its surroundings. Consideration must be given to mitigating overlooking, overshadowing, and potential noise impacts.
5. Where land containing buildings is subdivided, the subdivision must be designed so that the relationships between buildings and boundaries conform to all relevant provisions of the Building Code of Australia. Particular attention is required to setback distances from boundaries and fire resistance ratings of building elements within 3m of boundaries.
6. Refer to the *Rural and Rural Residential Roads* table in the Road Hierarchies section for road standards and easement widths.
7. Each lot must demonstrate legal and practical access to a public road.
8. Access will be from the street with the lowest traffic volume. Direct access from a State or Regional classified road is not permitted where access is achievable via an alternative road, laneway or easement.
9. Where the speed environment is greater than or equal to 70 km/h, new greenfield lots will be provided with vehicular access from a secondary rear street or service/frontage road or shared driveways.
10. The formation of driveway crossovers and full-length driveways is required at the subdivision stage for all battle axe lots or where a right of access is proposed.
11. Batters and retaining structures must be contained within the right of access. Minimum widths must be increased where necessary to accommodate these.
12. All new rights of carriageways or rights of access servicing 3 or more allotments will be named as part of the subdivision and referred to as lanes in accordance with Council's Road naming policy and its amendments.
13. Section 88B instruments must specify maintenance responsibilities for burdened and benefited lots.
14. See Table x for servicing controls for battle axe handles and rights of access.
15. Where Crown Roads form part of the subdivision, see *5.16 Crown roads*.

Connectivity and accessibility

Objectives

- Enhance connectivity and legibility within and between residential neighbourhoods by providing safe, direct, accessible and convenient neighbourhood street infrastructure for active travel, public transport users and motorists.

Controls

1. Subdivision design must provide for an overall transport movement hierarchy showing the major circulation routes and connections to achieve a simple and safe movement system for private vehicles, public transport and active travel.
2. Subdivision design will ensure a highly connected local street system, such as a grid, that provides for a walkable neighbourhood.
3. Council will not support subdivisions featuring cul-de-sac street layouts or non-connecting circuits, except where a cul-de-sac will result in higher lot yields and vehicular connectivity is not possible nor likely to be possible in the future.
4. Where Council does permit a cul-de-sac or non-connecting circuit adjacent a public reserve or an arterial or sub-arterial road, connectivity for active travel shall be provided.

Servicing standards

Electricity, telecommunications and street lighting

Objective

- Ensure residential subdivisions are appropriately serviced and can be adapted to future technological advancements.

Controls

1. Each lot will be separately serviced with:
    a. underground electricity, and
    b. fibre-ready facilities and fixed-line telecommunications infrastructure in the fibre-ready facilities, all at no cost to Council.
2. Street lighting shall be provided in accordance with Council's Street lighting policy and procedure.
3. Electricity substations and telecommunications service multiplexers will be located within suitable easements and will not be located within public road reserves.

Rural and rural residential subdivisions

Application

This section provides additional specific planning controls for land in rural and rural residential areas including the zones R5 Large Lot Residential, C3 Environmental Management, C4 Environmental Living, RU1 Primary Production, RU2 Rural Landscape and RU4 Primary Production Small Lots.

Lot layout and vehicular access

Objectives

- Ensure that the design and layout of rural and rural residential subdivisions supports the practical use and management of land, while minimising impacts on natural resources and biodiversity.
- Ensure the protection and enhancement of public and environmental health by regulating the approval of on-site wastewater management systems.
- Ensure legal, safe and efficient vehicular access between roads and lots.

Controls

1. The capacity of the site to provide sustainable on-site wastewater management must primarily inform the subdivision design. Proposed lot configurations, yields, building pads

and associated effluent disposal areas shall be informed by a Land Capability Assessment Report by a qualified and experienced engineer, in accordance with *5.7 On-site wastewater management.*

2. Where any lot is intended to have the potential for the erection of a dwelling, the plan of subdivision shall identify a building envelope:
    a. that complies with the required boundary setbacks,
    b. of sufficient dimensions to locate a dwelling, asset protection zone and on-site wastewater disposal area.
3. All subdivisions proposing creation of agricultural lots (being lots without a dwelling entitlement) must be supported by an agronomist's report demonstrating that the lot can operate as a stand-alone agricultural enterprise.
4. Any areas of land degradation shall be identified and rehabilitated as part of the subdivision to prevent sediments from reaching watercourses, and to prevent further land degradation.
5. Locate lot boundaries to minimise impacts on sensitive areas and ensure land can be easily managed. See Guidelines below.
6. Driveway crossovers from the public road or right of access to each proposed lot must be constructed at subdivision stage.
7. Where a proposed lot will be constrained (e.g. by waterways or steep or heavily vegetated land) the applicant must demonstrate that practical access is achievable from the legal access point to the proposed building site. Where the constraints are significant, Council will require the driveway to be constructed as part of the subdivision.
8. Lot access must be from a legal easement or the least busy road. Direct access to a classified road is not permitted when an alternative exists, otherwise subject to approval. Access to a State Classified Road is subject to approval from Transport for NSW.
9. The maximum number of lots that can be serviced by a right of access is four.
10. Multiple battle axe handles are generally not permitted in favour of a single right of access.
11. A proposed right of access, battle axe handle or any form of access over other land must be constructed as part of the subdivision. See Table x for servicing controls for battle axe handles and rights of access.
12. Section 88B instruments must specify maintenance responsibilities for burdened and benefited lots.

Guidelines

- To achieve better environmental outcomes from rural residential subdivision design, *Bega Valley Local Environmental Plan 2013* provides for lot size averaging in the R5, C3 and C4 zones.
- Locate potential dwelling sites with appropriate effluent disposal areas in the most suitable constraint free locations.
- Locate lot boundaries to minimise the impact on sensitive areas (such as steep land, watercourses, dams) and existing vegetation by running boundaries through cleared areas and taking the shortest distance through vegetated areas. Areas that require specific management measures (waterways, dams, conservation areas, soil and water management structures) should, if possible, be contained within one lot.
- Minimise boundaries across watercourses and drainage depressions and avoid placing lot boundaries along a watercourse bank or in riparian zones, as these areas are difficult to fence, fencing can be washed away, and watercourses and riparian areas can be managed more consistently by one landowner.

- Avoid creating lots that are bisected by a watercourse that creates large usable areas on each side of the watercourse, as this creates a barrier from one side of the property to the other and may later result in the need for further watercourse crossings.
- The use of easements over private access roads is supported to minimise the environmental impact of duplicated long driveways, however for the purpose of manageable driveway maintenance, the maximum number of lots using one right of access is four.
- Easements for public utility services may be required.
- A restrictive covenant pursuant to Section 88B of the *Conveyancing Act 1919* will be established on any agricultural lot, prohibiting the erection of a dwelling house on that land. Bega Valley Shire Council will be nominated as having the sole authority to release, vary or modify this covenant.
- Refer to the *Rural and Rural Residential Roads* table in the Road Hierarchies section for road standards and easement widths.
- Where Crown Roads form part of the subdivision, see *5.16 Crown roads*.

Servicing standards

Electricity and telecommunications

Objective

- Rural and rural residential lots are appropriately serviced.

Control

1. Every lot in new rural and rural residential subdivisions, with the exception of agricultural lots, will be serviced with:
   a) electricity
   b) telecommunications facilities and internet services

   all at no cost to Council.

   Council may accept alternative servicing arrangements such as off-grid electricity generation and wireless telecommunications services where it can be demonstrated that the service is available and provision of that service is more practical.

Guidelines

- Exemptions from pit and pipe requirements may be available under the *Telecommunications Act 1997* in certain circumstances. For details, visit the Department of Infrastructure, Transport, Regional Development and Communications' website.

Industrial subdivisions

Application

The following provides additional planning controls for land in the E3 Productivity Support, E4 General Industrial and E5 Heavy Industrial zones.

Lot layout and vehicular access

Objectives

- To ensure a variety of lot sizes are available for small, medium and large-scale operations.
- To provide efficient, logical and safe access to and between industrial areas for all modes of transport.

- To apply principles of natural surveillance, access control and space management to enhance safety and security within industrial areas.

Controls

1. Lots must be of sufficient size to allow for the siting of industrial units/buildings within required setbacks, and ancillary facilities including vehicular access and circulation, parking, loading and unloading of goods, storage, waste management and landscaping. Create larger lots where natural features restrict the developable area of the land.
2. Subdivision design must provide for an overall transport movement hierarchy showing the major circulation routes and connections to achieve a simple and safe movement system for private vehicles, public transport, and active travel.
3. Ensure industrial subdivisions are walkable. See Guidelines.
4. The design of industrial subdivisions must not include areas of public reserve or drainage reserves or other areas likely to accumulate rubbish or waste.
5. Lot layout and active travel networks must be configured to enhance personal safety and minimise potential for crime and vandalism. Where possible, avoid the use of battle axe lots. Battle axe handles serving multiple lots are not permitted. See Table x for servicing controls for battle axe handles and rights of access.
6. Secure fencing and landscaped buffer zones shall be provided at the subdivision stage along property boundaries adjoining non-industrial areas, to provide a consistent boundary treatment and mitigate visual and noise impacts. Fencing requirements must comply with the requirements of 2.6.1.2 Fencing and Retaining Walls. The design of landscaped buffer zones should be informed by *Planning for Bush Fire Protection 2019*, which provides guidance on narrow vegetation corridors and low-threat vegetation exclusions.
7. Greenfield subdivisions must provide a clear road hierarchy that considers the needs of all road users, with individual lot frontages and driveways provided to minor internal roads. The use of shared access roads (easements) is not acceptable in industrial subdivisions.
8. Greenfield subdivisions must provide safe and accessible crossings for streets and roads, including the installation of necessary traffic controls and kerb ramps.
9. Footpaths must be located in areas of high passive surveillance from adjacent streets and dwellings and serviced with street lighting in accordance with Council's Street lighting policy and procedure.
10. Direct access to a classified road is not permitted where access is achievable via an alternative road or laneway. Access to a State Classified Road is subject to approval by Transport for New south Wales.
11. Where possible, avoid use of cul-de-sacs, unless it can be demonstrated there is no practical alternative.

Guidelines

- Where 10 or more lots are proposed, the subdivision should provide some variety in lot sizes, appropriate to the likely types of industrial activities in the area.
- Given that desired lot sizes are difficult to predict at the subdivision design stage, the subdivision design should allow for as much flexibility as possible, with lots able to be easily consolidated as required. Larger subdivisions may opt for a staged approach and progressively adjust lot sizes to respond to market demand.
- Where battle axe lots are proposed, it must be demonstrated that the lot will have some public facing frontage, to avoid creation of 'hidden' lots prone to theft and vandalism. Council may require the installation of security fencing and gates at the subdivision stage.

- To facilitate the movement of large and cumbersome vehicles, subdivision design should incorporate circuits rather than cul-de-sacs.
- Road access should avoid attracting unrelated fast-moving traffic seeking a shortcut. Design road access to provide connectivity to other adjacent industrial areas and arterial roads.
- Walkable industrial subdivisions generally feature blocks limited to 250m in length.
- Refer to *Commercial and Industrial Roads* table in the Road Hierarchies section for road standards and reserve widths.

Servicing standards

Electricity, telecommunications and street lighting

Objective

- To develop industrial land efficiently.

Controls

1. Every lot in new industrial subdivisions will be serviced with:
   a) underground electricity
   b) street lighting
   c) fibre-ready facilities and fixed-line telecommunications infrastructure in the fibre-ready facilities

   all at no cost to Council.
2. Electricity substations and telecommunications service multiplexers will be located within suitable easements and will not be located within public road reserves.

Guidelines

- Street lighting shall be provided in accordance with Council's Street lighting policy and procedure.
- Street lighting shall use only basic standard poles and light fittings maintained by the local electricity authority.
- Exemptions from pit and pipe requirements may be available under the *Telecommunications Act 1997* in certain circumstances. For details, visit the Department of Infrastructure, Transport, Regional Development and Communications' website.