NOTE: This Chapter should not be read in isolation. You may need to consider other chapters of this DCP when preparing your application.



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Amendment history								
Version Number	Date Adopted by Council	Commencement Date	Amendment Type					
1	28 August 2018	26 September 2018	New					
2	1 December 2020	9 December 2020	Amendment					
3	1 June 2021	16 July 2021	Amendment					

#### 1 Purpose

The purpose of this Chapter is to facilitate the development of land in the Moss Vale Road South Urban Release Area (URA) in accordance with the provisions of Part 6 of Shoalhaven Local Environmental Plan (LEP) 2014.

**Advisory Note:** In addition to the provisions outlined in this Chapter you must refer to the:

- Moss Vale Road South Species List.
- Moss Vale Road South Integrated Water Cycle Assessment.

## 2 Application

This Chapter applies to the Moss Vale Road South URA, as shown on the Subject Land Map (**Figure 1**). The area is approximately 5 km north-west of the Nowra CBD and is south of the Moss Vale Road North URA.

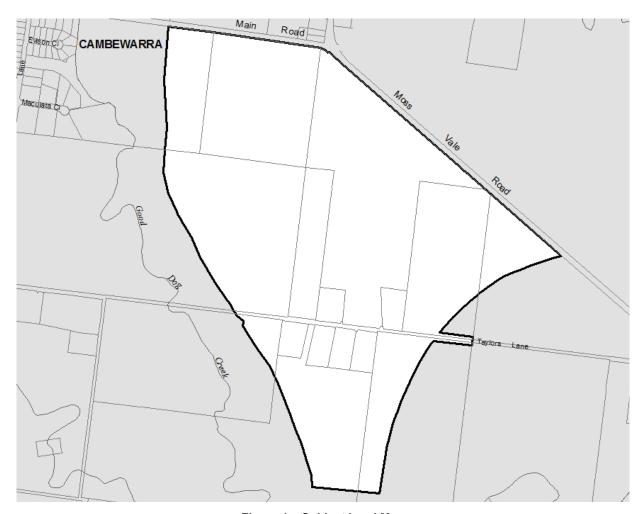


Figure 1 - Subject Land Map

#### 3 Context

The Moss Vale Road South URA is part of a pastoral landscape of high scenic value. The pastoral landscape offers a visually appealing transition in land use and topography from the heavily forested Cambewarra Range and the urban settlement of Nowra-Bomaderry. Located on the lower southern slopes of the Cambewarra Range, the area is highly visible from the Moss Vale Road tourist drive and the Cambewarra Mountain Lookout.

## 4 Objectives

The objectives are to:

- Provide sound objectives and controls that build on sustainable living, economic vitality and community wellbeing principles.
- Promote neighbourhood design that achieves healthy, active and high quality urban design outcomes.
- Ensure that the environmentally sensitive development of the Moss Vale Road South URA occurs in an integrated and efficient manner.

### 5 Vision





The Moss Vale Road South URA will become a highly desirable urban area that complements its natural environment by building on significant assets including riparian corridors and elaborate views of natural features including creeks, sylvan backdrops and pastoral landscapes.

The Moss Vale Road South URA offers considerable opportunities to create a highly desirable residential environment that incorporates large expanses of passive open space that has multiple functions. The open space areas form part of the movement network for pedestrians and cyclists, provide a variety of recreational opportunities, protects riparian corridors, integrate areas of significant and remnant vegetation, and water sensitive urban design.

A variety of residential styles and densities will be provided by encouraging a mix of lot sizes and housing products at different price points. Housing choice in this URA will appeal to a broad future community including first-home buyers and households wishing to downsize; and everyone in between. Increased densities will be located in high amenity areas that can

be easily serviced by public transport and public open space, with lower housing density appropriately transitioning into the rural landscape on the edges of the URA.

## 6 Key Development Outcomes for the Moss Vale Road South URA

The Moss Vale Road South URA will be designed to incorporate the following key development outcomes which are to be considered in the Design Verification Statement submitted at the subdivision Development Application (DA) stage.

- i. The URA will provide housing diversity by enabling the development of various housing types to meet the needs for the future community. Where small lots are provided, they:
  - a. Engage with the street and open space areas by minimising the dominance of garages and vehicular parking spaces.
  - b. Maximise access to open space areas.
- ii. The defined street hierarchy is determined by the placement and design of road types and achievement of the intended function. The street hierarchy is important to enable an accessible and connected movement network that integrates walking, cycling and public transport routes that are safe and convenient. The street types include:
  - a. Collector Road provides an attractive entry and loop around the URA which will facilitate the provision for a future public transport route. All dwellings within the URA are approximately 400m walking distance from the Collector Road.
  - b. *Tree-lined Boulevard* two boulevards are provided in the URA. They are characterised by tree lined verges, planted road blisters and shaded footpaths that connect two large open space areas. Tree-lined boulevards are generally access restricted streets and are the focus for small lot development.
  - c. *Local Streets* provides access to residential areas from the Collector Road and Tree-lined Boulevard. They are relatively narrow streets encouraging slower vehicle speeds. Local streets are important components of the street network as they facilitate permeability within the URA.
  - d. Laneways provide rear access and waste collection to small lots (generally small lots located along the access restricted Tree-lined Boulevard). They are designed to be short in length to optimise passive surveillance and minimise the visual impact of the laneways.
- iii. Open space areas will meet environmental sustainability objectives and be adaptable spaces. They will function to protect and enhance riparian corridors and significant and remnant vegetation, incorporate water sensitive urban design elements and create opportunities for passive recreation.

#### 7 Controls

#### 7.1 Indicative Layout Plan

The Indicative Layout Plan (ILP) at **Figure 2** illustrates the key development outcomes for the Moss Vale Road South URA.

#### 7.1.1 Objectives

- i. To ensure development is undertaken in a coordinated manner that responds to the topography, views and the natural environment.
- ii. To provide a variety of lot sizes that facilitate a range of housing types in appropriate locations.
- iii. To ensure well connected and legible movement network that will provide a variety of routes for vehicles, pedestrians and cyclists both within the neighbourhood and to surrounding areas.
- iv. To provide public open space that enhances existing landscape values, protects significant and remnant vegetation, provides opportunity for stormwater management and improves the amenity for future residents.

#### 7.1.2 Performance Criteria and Acceptable Solutions

#### **Performance Criteria**

#### **Acceptable Solutions**

P1 Development is undertaken in a coordinated manner that is consistent with the ILP.

A1.1 Development within the URA is in accordance with the ILP (**Figure 2**).

**Note**: Variations to the ILP may be considered where the applicant provides sound justification and can demonstrate that the proposed development meets Sections 5, 6 and 7 of this Chapter.

- A1.2 Subdivision must demonstrate consistency with the following of the below residential density targets in relation to the ILP:
  - Large Lot Residential: 10-14 dwellings per hectare.
  - Standard Lot Residential: 15-20 dwellings per hectare.
  - Small Lot Residential and Medium Density/Integrated Housing: 21-35 dwellings per hectare.

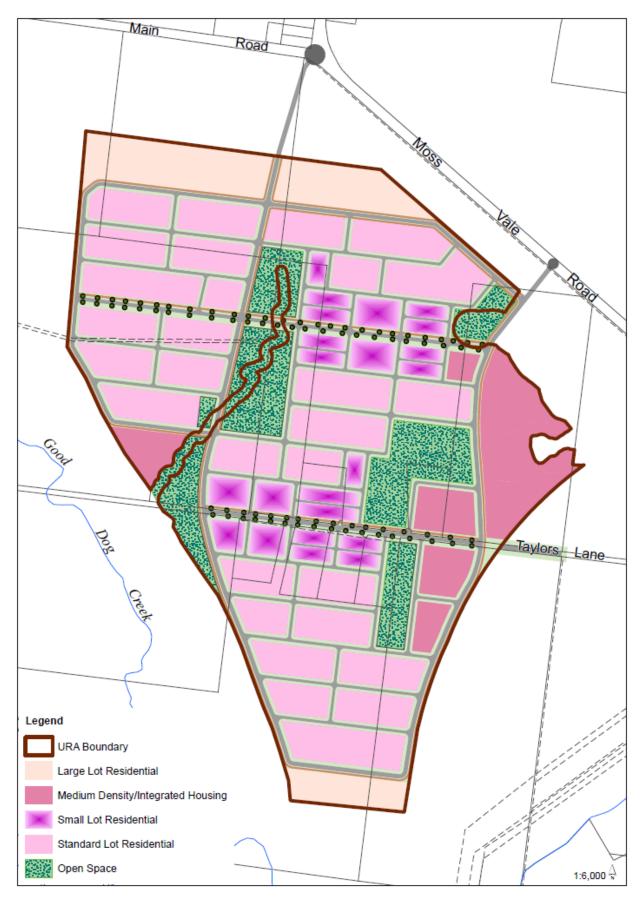


Figure 2 - Indicative Layout Plan

#### 7.2 Staging

#### 7.2.1 Objectives

i. To ensure the development of the URA enables efficient release of residential land and essential infrastructure.

#### 7.2.2 Performance criteria and acceptable solutions

#### **Performance Criteria**

# P2 Development is staged to enable orderly development and provision of necessary infrastructure.

#### **Acceptable Solutions**

- A2.1 The staging of the URA is undertaken in accordance with **Figure 3**.
- A2.2 Sub-stages within the stages identified in **Figure 3** is acceptable where infrastructure delivery has not been compromised.



Figure 3 - Indicative Staging Plan

**Note:** The construction of Taylors Lane to the east of the URA boundary is separate to the development of the URA and subject to the delivery of the Far North Collector Road project.

#### 7.3 Subdivision Design

#### 7.3.1 Objectives

- i. To create an attractive urban environment that meets the changing needs of the community and offers a wide choice in good quality housing.
- ii. To create a mix of lot sizes that provide a range of dwelling types to suit the needs of the community.
- iii. To ensure that all residential lots are able to have a high level of amenity in terms of solar access, views and proximity to public open space.
- iv. To ensure that subdivision layouts respond to the natural environment and the escarpment and rural vistas.
- v. To create a subdivision pattern that facilitates the efficient provision of infrastructure.
- vi. To enhance community interaction and outdoor activity through the provision of public space.

#### 7.3.2 Mandatory Controls

1) Subdivision applications require the lodgement of a Design Verification Statement in support of the application.

**Note:** See Section 8.1 of this Chapter for guidelines to preparing a Design Verification Statement.

2) Lot widths are to be relative to the lot area as per **Table 1** below:

Table 1 - Lot width requirements

Lot size (m²)	Minimum Width (m)
300 – 399	>8 and <12
400 - 499	Equal to or >12 and <15
500+	In accordance with Chapter G11: Subdivision of Land

- 3) Subdivision of small lots must have varying lot widths. No more than three consecutive lots shall have the same lot width. A minimum variation of 10% of the adjacent lot width is required.
- 4) Street blocks are designed to be rectangular in shape to enable permeability. The length and width of street blocks (excluding road verges) are a maximum of:
  - 100m x 70m in areas where small lots are proposed and rear lane access or shared driveways are located.
  - 200m x 70m in all other areas.
- 5) The subdivision layout is designed to maximise the number of north facing dwellings as per the indicative subdivision patterns demonstrated in **Figures 4 to 6**. In the case of certain forms of medium density housing and zero-allotments, preference will be

given to an east-west orientation in order to maximise solar access along the longest dwelling elevation.



Figure 4 - Indicative Subdivision Pattern

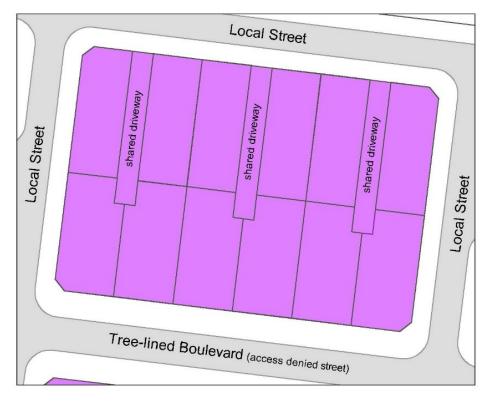


Figure 5 - Indicative subdivision pattern on small lots with shared driveway access

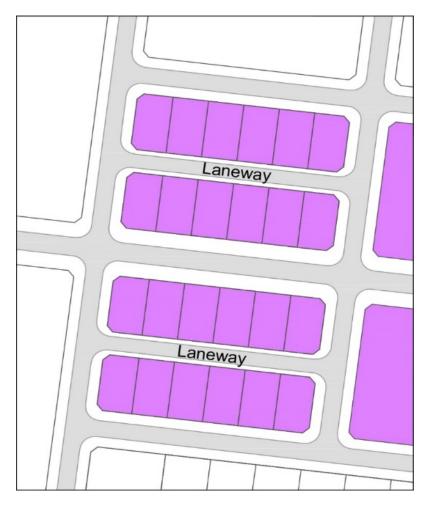


Figure 6 - Indicative subdivision pattern for small lots with rear laneway access

- 6) Subdivision of small lots in accordance with Shoalhaven LEP 2014 must:
  - Have a primary street frontage; and
  - Access is provided via a rear laneway or shared driveway arrangement, except for lots equal to or greater than 400m<sup>2</sup>.
- 7) Lots less than 400m² include a restriction as to user via a Section 88B instrument that restricts vehicular access from the primary road frontage.
- 8) Battle-axe lots are avoided unless the access handle provides rear access to small lots.

**Note:** In Moss Vale Road South URA, battle-axe lots may be allowed where access is provided by a shared driveway as a result of the allotment being located on an access denied street (i.e. tree lined boulevard). **See Figure 5**.

#### 7.3.3 Performance criteria and acceptable solutions

#### **Performance Criteria**

P3 Zero lot line developments are appropriately placed on small lots.

**Note**: At the subdivision stage, a restriction is to be included on a Section 88B Instrument on lots with potential zero lot line and the adjacent burdened lot to:

- Include a 900mm easement for ongoing maintenance and support of the zero-lot line boundary wall.
- Exclude Council from any dispute resolution process between the adjoining lots.
- To restrict placement of overhanging eaves, gutters or services (rainwater tanks, air conditioning units, hot water units and the like) within the easement.

#### **Acceptable Solutions**

A3.1 The location of zero lot lines are based on orientation and topography. The zero lot line should be located on the most southern side of the lot (refer to **Figure 7**) to maximise solar access.

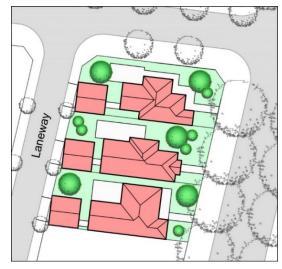


Figure 7 - Location of Zero Lot Lines

- A3.2 The location of proposed zero lot lines must be demonstrated on the subdivision plan.
- P4 Corner allotments are designed to encourage safe vehicular and pedestrian movement.
- A4.1 Corner lots shall allow for a minimum splay of 2m x 2m to allow for pedestrian and vehicular sight distance.
- P5 Lot layout avoids rear boundaries fronting public spaces.
- A5.1 Where residential development adjoins public spaces (excluding laneways) the subdivision design enables the configuration of dwellings or other residential accommodation uses to front the public space.
- P6 Subdivision layout enables significant views and vistas to be retained.
- significant A6.1 The street layout enables view lines to be established to open space areas within the URA, and to escarpment and pastoral landscapes beyond the URA as per **Figure 8**.
  - A6.2 The subdivision layout considers views into the URA from Moss Vale Road, Main Road, Taylors Lane and North Nowra.

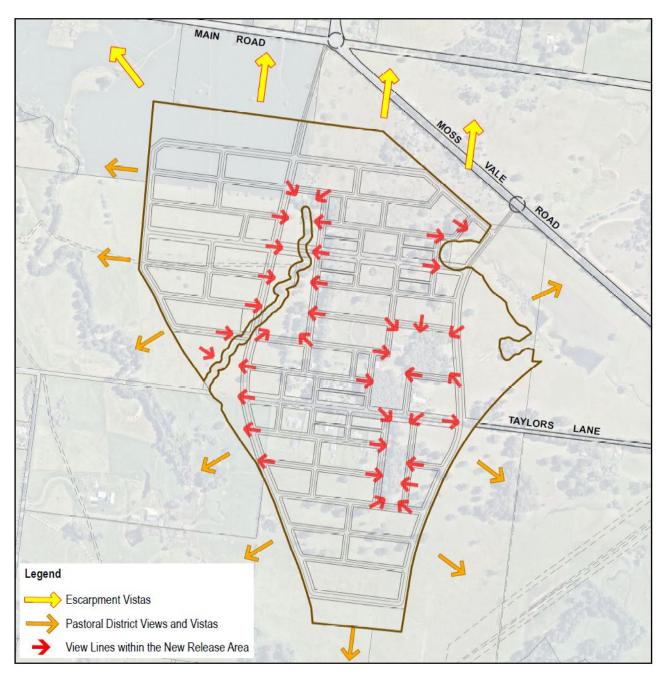


Figure 8 - Significant Views and Vistas

#### 7.4 Street Network and Hierarchy

#### 7.4.1 Objectives

- i. To achieve a safe and convenient movement network for private vehicles, public transport, pedestrians and cyclists.
- ii. To provide a connected and legible street network within and beyond the URA.
- iii. To provide a street layout is informed by natural features, terrain and views.
- iv. To create a distinct street hierarchy that is distinguishable through changes in the design of the street.

v. To encourage a high quality and visually attractive public domain whilst being functional, legible and safe.





#### 7.4.2 Mandatory Controls

- 1) The street network is to be provided in accordance with **Figure 2** and **Figure 9**. Where a variation to the residential street network is proposed, achievement of the following principles must be demonstrated:
  - Establish a defined street hierarchy and permeable street network as per the key development outcomes,
  - Encourage walking and cycling by ensuring allotments are within 400m walking distance from the Collector Road,
  - Maximise connectivity between residential areas and open space,
  - Take account of topography and improve connectivity between significant and remnant vegetation through revegetation,
  - Optimise solar access opportunities for dwellings,
  - Provide frontage to and maximise surveillance of open space and riparian corridors,
  - Provide views and vistas to key landscape features,
  - Maximise the use of water sensitive urban design measures,
  - · Minimise the use of four-way intersections, and
  - Minimise the use of cul-de-sacs.

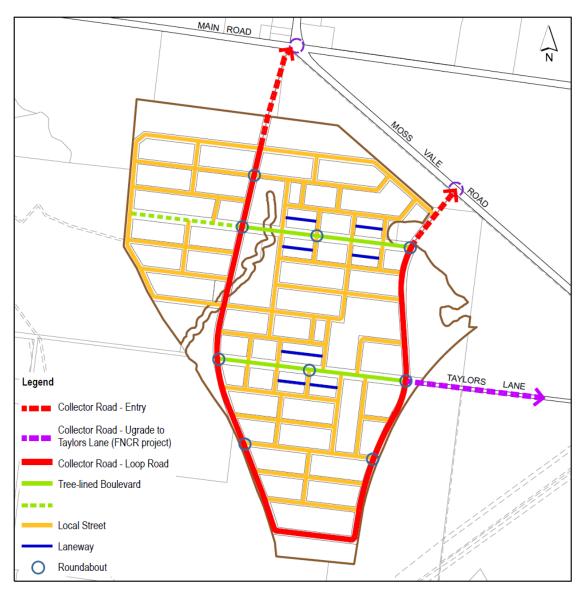


Figure 9 - Street Hierarchy and Network Plan

**Note:** Taylors Lane east of the URA boundary will be provided as part of the Far North Collector Road project.

2) Streets are designed in accordance with Tables 2 to 6 and Figures 10 to 14. Carriageway widths are measured from lip to lip. Where roads are adjacent to a public open space area, the verge widths may be reduced to a minimum of 1.5m subject to adequate provision of footpaths, utilities, fencing, required Asset Protection Zones or buffers to riparian corridors.

**Note:** Construction of <u>roads</u> is to be in accordance with the requirements of Chapter G11: Subdivision of Land.

Indicative Layouts are diagrammatic only and do not represent the minimum widths to true scale.

## **Collector Road (Entry)**

Table 2 - Minimum cross-section width of Collector Road (entry) and kerb type

	Verge Carriageway					Verge			Total (approx.)	Kerb
Offset	Path	Planting	Lane	Median	Lane	Planting	Shared Path	Offset		Dowies
1.5	1.5	1.5	5.5	2	5.5	1.2	2	1.2		Barrier (630mm)
	4.5			13			4.4		21.9m	

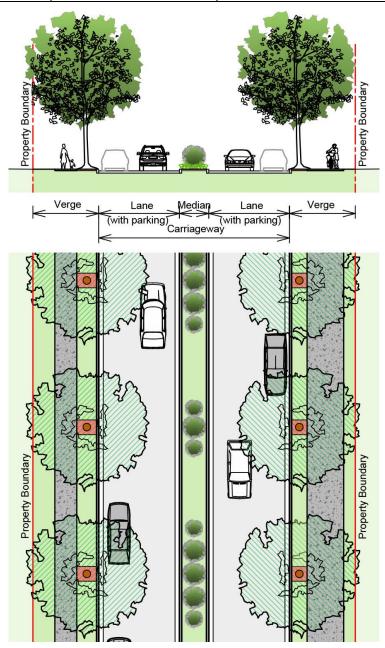


Figure 10 - Indicative Layout of Collector Road (Entry)

## **Collector Road**

Table 3 - Minimum cross-section width of Collector Road and kerb type

Verge			Carriag	jeway	Verge			Total (approx.)	Kerb
Offset	Path	Planting	Lane		Planting	Shared Path	Offset		Darrier
1.5	1.5	1.5	5.5	5.5	1.2	2	1.2		Barrier (630mm)
	4.5		11			4.4		19.9m	

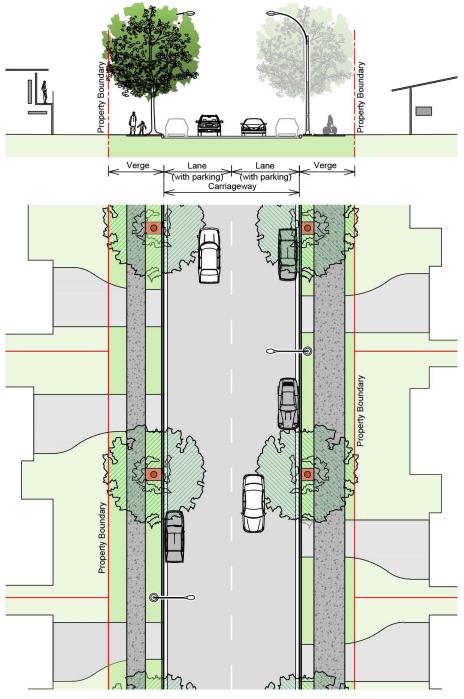


Figure 11 - Indicative Layout of Collector Road

## **Tree-lined Boulevard**

Table 4 - Minimum cross-section width of Tree-lined Boulevard and kerb type

	Verge			Carriageway Verge				Total (approx.)	Kerb		
Offset	Path	Planting	Parking / Blister	Lane	Lane	Parking / Blister	Planting	Shared Path	Offset		
1.1	1.5	1.2	2.3	3.5	3.5	2.3	1	2	0.5		Barrier
		6.1		7	7		5.8			18.9m	

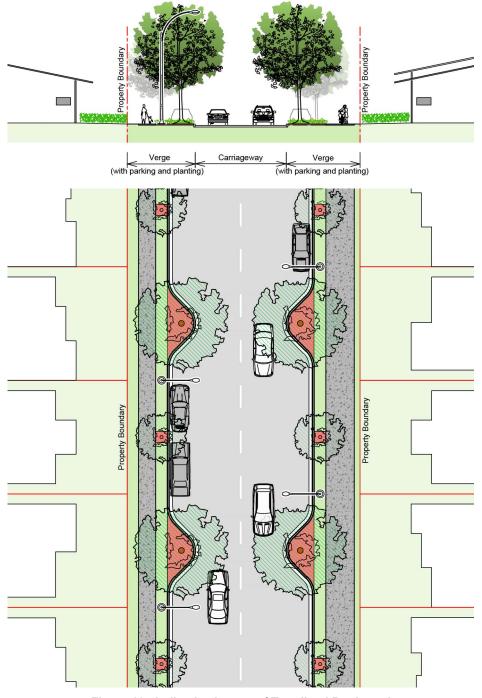


Figure 12 - Indicative Layout of Tree-lined Boulevard

## **Local Street**

Table 5 - Minimum cross-section width of Local Street and kerb type

	Verge Carriageway Verge		Carriageway		Verge	Total (approx.)	Kerb
Offset	Path	Planting	Lane	Lane	Planting		l avda a alc
1	1.5	2	3.5	3.5	4.5		Layback (700mm)
	4.5			7	4.5	16m	

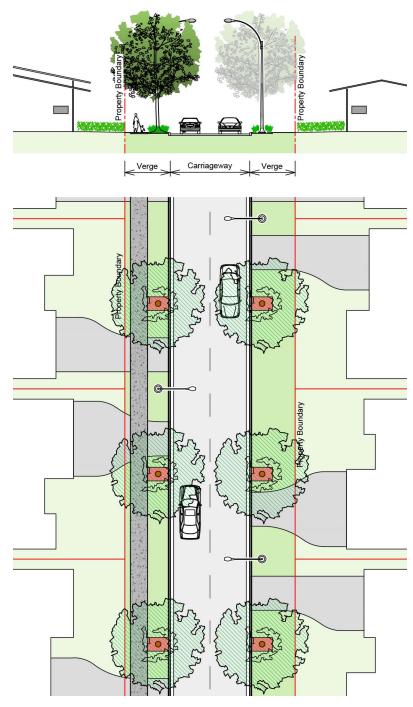
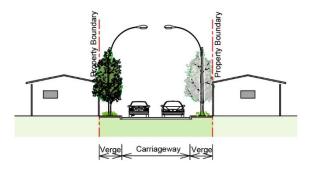


Figure 13 - Indicative Layout of Local Street

## Laneways

Table 6 - Minimum cross-section width of Laneway and kerb type

Verge	Carriageway		Verge	Total (approx.)	Kerb
Planting	Lane	Lane	Planting		
2.5	3	3	2.5		Layback
2.5		6	2.5	11m	



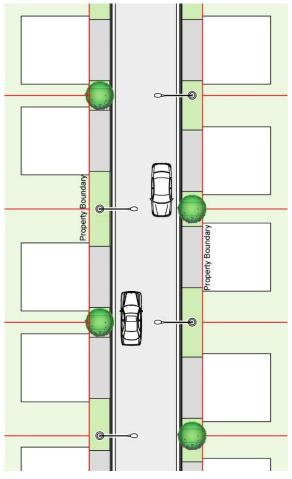


Figure 14 - Indicative Layout of Laneways

3) No direct vehicular access or waste collection is permitted on Tree-lined Boulevards, except for the area to the far-west of the western Collector Road (as illustrated by the dashed line in **Figure 9**).

**Note:** At the subdivision stage, a restriction is to be included on a Section 88B Instrument on lots located on the access-denied section of the tree-lined boulevard to restrict vehicular access to the rear laneway or shared driveway only.

4) The Collector Road is designed to allow for a future public transport route as per **Figure 15**.

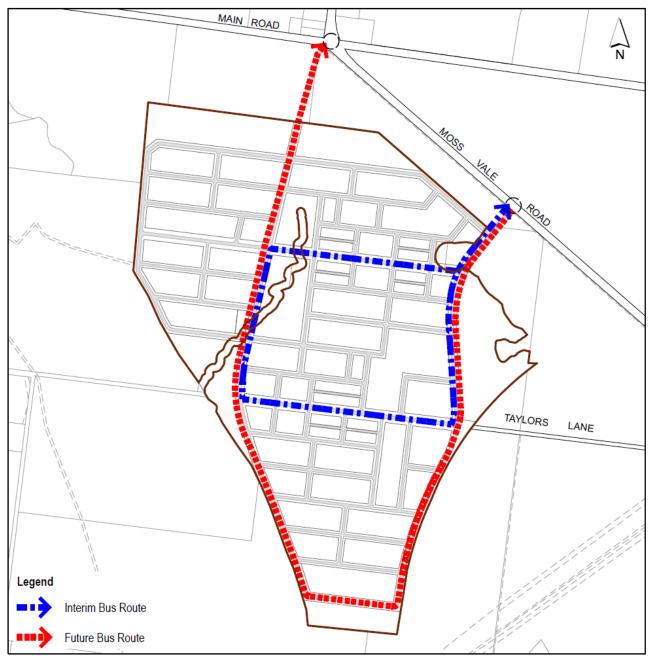


Figure 15 - Indicative Public Transport Route

- 5) All streets must be designed to produce a low speed environment primarily governed by the road geometry, traffic management and calming devices may be considered if required. Such traffic management devices are to be identified at subdivision DA stage.
- 6) Street trees are required on all streets and are to be placed within the verge as per Figures 10 to 14, and Tables 2 to 6. Placement of street trees will consider underground services, driveways and easements in accordance with Figure 16. Street tree species are to be selected from the Moss Vale Road South Species List in order to establish a distinct identity for the URA. Street trees are planted with appropriate root guards to protect underground infrastructure, pathways, kerb and gutters. Street tree planting is alternated with street lighting.
- 7) Construction of verges provide adequate space for underground service allocation and street trees as per **Figure 16**.

**Note**: The centre line for street trees is determined as an equal distance from the kerb to the trench for the water service allocation.

Service pillars are not to be located within the verge.

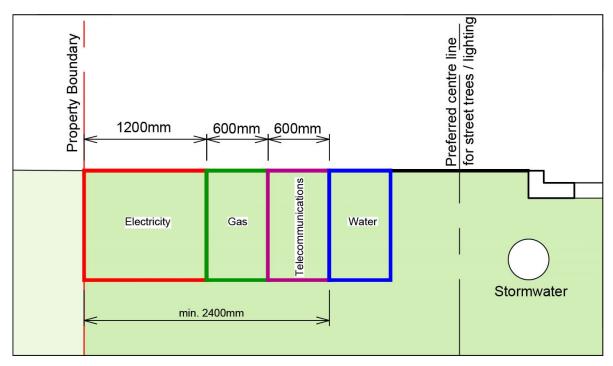


Figure 16 - Underground Service Allocation

8) All construction access is to be provided via Moss Vale Road. Taylors Lane will be suitable for use after the completion of the Far North Collector Road project.

#### 7.5 Laneways

#### 7.5.1 Objectives

- To create attractive primary frontages by removing garages and driveway crossovers, improving the presentation of houses and maximising on street parking spaces and street trees.
- ii. To promote housing diversity without compromising amenity, particularly for smaller sized allotments.
- iii. To create a slow speed shared zone that is distinctly different in character and materials to residential streets to reflect the very low volume and frequency of vehicle movements.





#### 7.5.2 Performance criteria and acceptable solutions

#### **Performance Criteria**

P7 Laneways are of a size and layout that A7.1 encourage low volume and safe use, maximise favourable lot orientations, legibility, passive surveillance and accommodate waste collection.

**Note**: Laneways are secondary frontages providing rear access. They do not:

- Act as a primary frontage;
- Provide on-street car parking; and
- Include footpaths.

#### **Acceptable Solutions**

- A7.1 No more than two sets of continuous laneways are provided, except where they are transected by Tree-lined Boulevards or Collector Road.
- A7.2 The laneway verge (excluding driveway crossovers) is to be soft landscaped to improve overall amenity and stormwater infiltration.
- A7.3 Where a site is located on an access denied street, waste collection and general vehicular access is to occur from the laneway.
- A7.4 Laneways incorporate sufficient lighting to meet Crime Prevention Through Environmental Design (CPTED) principles.

**Note:** Refer to Chapter 2: General and Environmental Considerations of this

DCP for an overview of CPTED considerations.

A7.5 A restriction as to user via the Section 88B instrument to restrict driveways on the front boundary.

#### 7.6 Shared Driveways

#### 7.6.1 Objectives

- i. To minimise the impact of driveways on the function of main streets, quality of the public domain and pedestrian safety.
- ii. To enable shared driveway access to lots fronting access denied roads.
- iii. To provide safe and easy access to garages and on-site parking arrangements.





#### 7.6.2 Performance criteria and acceptable solutions

#### **Performance Criteria**

P8 Shared driveways provide access to small allotments to discourage garage dominated streetscapes.

**Note**: Shared driveways are privately owned and maintained driveways that serve two to four dwellings through a titling arrangement such as a reciprocal right of way or community title subdivision.

#### **Acceptable Solutions**

- A8.1 Shared driveways are provided for small lots from local streets only.
- A8.2 Shared driveways provide vehicular access to no more than 4 dwellings.
- A8.3 Configuration of shared driveways is provided as per **Figure 17** below.
- A8.4 Shared driveways have a different construction material to road surface.
- A8.5 Lots that are accessed via a shared driveway have a primary street frontage.



Figure 17 - Shared driveway configuration

- A8.6 Shared driveways are a maximum of 6m wide.
- A8.7 The location of driveways must consider dwelling design and orientation, distance from intersection, street gully pits and tree bays.
- A8.8 Location of shared driveways must be located a minimum 10m from splitter islands associated with roundabouts.
- A8.9 Shared driveways are a minimum 0.5m from any drainage facilities on the kerb and gutter.
- A8.10 Shared driveways incorporate soft landscaped areas on either side at a minimum width of 1m, suitable for infiltration.
- A8.11 Waste collection from shared driveways is not permitted. A waste collection point is provided directly adjacent to the shared driveway crossover on the local street. Waste collection points are provided as constructed bays are a minimum 1m deep and 5m wide.

#### 7.7 Pedestrian and Cycle Routes

#### 7.7.1 Objectives

- i. To ensure streets and the open space network provide the main pedestrian and cycle routes within the neighbourhood.
- ii. To ensure shared user paths are part of a connected system which provides a variety of routes to destinations within and outside of the URA.





#### 7.7.2 Performance criteria and acceptable solutions

#### **Performance Criteria**

#### **Acceptable Solutions**

P9 Shared pedestrian and cycle paths A9.1 connect the urban area to the open space network.

Shared user paths are located within the verge except for where located within the open space areas as per **Figure 18**.

**Note:** The location of shared user paths in the verge is to avoid any water supply mains.

A9.2 The location of shared user paths in open space areas avoid any existing, established vegetation to ensure retention.

**Note:** The location of shared user paths within open space areas in **Figure 18** are indicative only.

A9.3 Shared user paths are 2m wide except for the shared path parallel to Moss Vale Road which is to be 2.5m wide.

**Note**: Refer to Section 7.4 of this Chapter for locations and minimum widths.

A9.4 Shared user paths are constructed as per Chapter G11: Subdivision of Land.

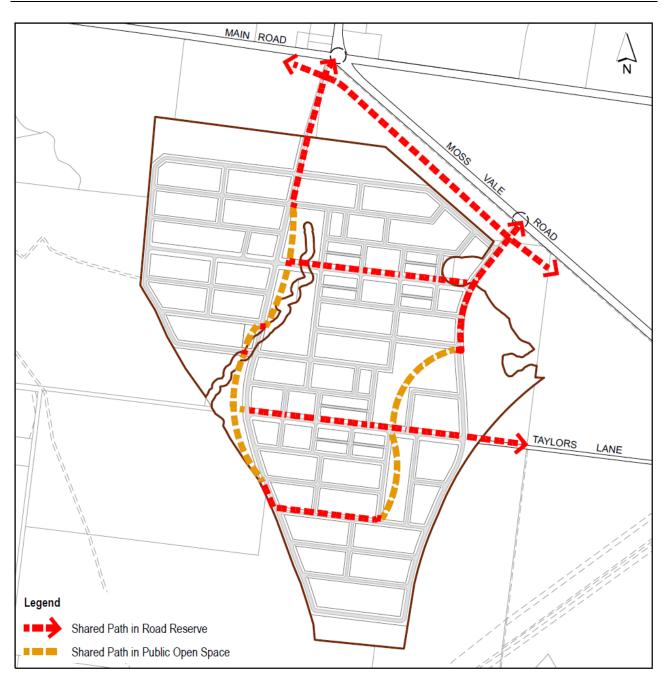


Figure 18 - Pedestrian and Cycle Routes

**Note:** Desired broader connections are identified by arrows.

#### 7.8 Open Space System

#### 7.8.1 Objectives

- i. To ensure that future residents of all ages and abilities have access to a high quality functional open spaces for passive and active recreation.
- ii. To ensure the connected network of open spaces within the URA are accessible and provide pedestrian and cycle routes.
- iii. To provide multi-functional open space areas that are able to encourage a range of activities within the neighbourhood's diverse open space areas.
- iv. To incorporate significant areas of natural value within the open space network.
- v. To ensure the design and embellishment of the open space is of high quality, robust, low maintenance and addresses the vision of the URA.





#### 7.8.2 Performance criteria and acceptable solutions

Performance Criteri
---------------------

#### **Acceptable Solutions**

- P10 Open space areas are of a high amenity, accessible, well connected and act as a destination to encourage physical movement, activity and social interaction.
- A10.1 Open spaces areas are located in accordance with the ILP at **Figure 2**.
- A10.2 Open space areas incorporate facilities such as seating, playgrounds, BBQs, paved areas and landscape planting.
- A10.3 The open spaces act as gateways marking connections and transitions to adjoining areas.
- A10.4 Open space areas are provided in accordance with Chapter G11: Subdivision of Land.
- P11 Open space areas retain and enhance A11.1 significant vegetation and provide a treed backdrop for views within the neighbourhood.
- A11.1 Significant areas of natural and environmental value are retained, enhanced and incorporated into the open space network.

#### 7.9 Landscape Strategy

#### 7.9.1 Objectives

- To achieve a landscape setting to balance the built form through well planted streets, open spaces, treed backdrops and lot sizes that provide opportunities for planting in private open space.
- ii. To protect, maintain and enhance areas containing environmental heritage, remnant vegetation and established trees.
- iii. To enhance both the public and private amenity within the URA.
- iv. To contribute to the overall water sensitive urban design approach within the URA.
- v. To protect the valuable landscape and environmental values of the URA.
- vi. To embellish and rehabilitate the environmental corridor / scenic protection area adjacent to Moss Vale Road and Main Road.





#### **Performance Criteria**

#### **Acceptable Solutions**

P12 Landscaping is provided to complement and soften the built form and surrounding natural landscape.

- A12.1 A landscape strategy, prepared by a suitably qualified person, is submitted at the subdivision DA stage. The landscape strategy is to include as a minimum:
  - Landscape Plan as per Chapter G3: Landscaping Design Guidelines;
  - Entry treatment (only for stages that include entry from Moss Vale Road and Taylors Lane);
  - Extensive landscaping and street tree planting that incorporates deep rooted canopy trees as per the Moss Vale Road South Species List;
  - Protection of remnant vegetation and established trees primarily in the public domain (as per Figure 19);

		<ul> <li>Protection of riparian corridors (See P15 and A15.1 below);</li> </ul>
		<ul> <li>Provision of landmark tree planting along the two tree-lined boulevards;</li> </ul>
		• Establishment of a street lighting and furniture palette;
		<ul> <li>Inclusion of any relevant signage detailing local history, Aboriginal cultural values, environmental education themes and the like;</li> </ul>
		<ul> <li>Deep soil planting to enable a substantial tree cover to be created over time;</li> </ul>
		<ul> <li>Removal of existing noxious and environmental weed species; and</li> </ul>
		• Rehabilitation of E3 Environmental Management zones.
	A12.2	Provision of landscaping does not impact sight distances for traffic and pedestrians. Minimum safe sight distances must be maintained.
P13 Retain existing established trees.	A13.1	Landscaping is designed in consideration of existing established trees through their retention in the public domain, including road reserves and open spaces. Sufficient space around existing established trees is provided to minimise potential hazards to structures.
	A13.2	Flora and fauna assessment considers any trees for removal for risk and safe



Figure 19 - Public Domain Landscape Strategy

#### 7.10 Environment

#### 7.10.1 Objectives

- i. To achieve a high standard of environmental performance and management of natural assets and environmental heritage within the URA.
- ii. To protect and enhance remnant vegetation through incorporation within the open space and stormwater network.
- iii. To retain the maximum amount of established trees in the URA.

ίV. To mitigate the impacts of development on water quality and quantity.





#### 7.10.2 Performance criteria and acceptable solutions

#### **Performance Criteria**

#### **Acceptable Solutions**

P14 Significant and remnant vegetation and habitat for threatened species is retained and protected.

A14.1 Significant and remnant vegetation (including native vegetation) within the public domain, including in open space areas, is retained and opportunities for enhancement are included.

> Note: Threatened species have been identified in this URA.

> A comprehensive Flora & Fauna assessment is to be prepared by a suitably qualified and experienced person and is to include an analysis of constraints and opportunities, identify / map areas for rehabilitation and assessment to consider any trees for removal for risk and safe useful life expectance.

- A14.2 Identify impact mitigation and management measures to protect threatened species including but not limited to bats.
- improved.

Note: The riparian corridors are linear tracts of land associated with the Shoalhaven River drainage system. They are important for maintaining biodiversity, water quality and bank stability. They are a significant

- P15 Riparian corridors are protected and A15.1 Continuous riparian zones are provided along Bomaderry Creek, Good Dog Creek and unnamed creek.
  - A15.2 Riparian zones and associated buffers are to be retained and enhanced using local native species to improve the ecological functions of the watercourses.

component of the Nowra-Bomaderry conservation strategy and represent both constraints and opportunities to urban development.

- A15.3 Buffers are vegetated to protect the integrity of the riparian zone from weed invasion, littering, sedimentation, erosion control pollution and impacts of climate change.
- A15.4 Fencing within riparian corridors are minimised and across watercourses is not permitted. Where fencing is required for safety purposes, the design must allow terrestrial and aquatic fauna to pass through.
- P16 Incorporate elements of Aboriginal cultural A16.1 An and environmental heritage within the open space areas of the URA to ensure subtheir protection.
- A16.1 An Aboriginal Cultural Heritage Assessment is submitted at the subdivision DA stage.

**Note:** Refer to Guidelines by the Office of Environment and Heritage as the relevant authority under the *National Parks and Wildlife Act 1974*.

A16.2 Where culturally appropriate and acceptable any Aboriginal cultural heritage identified through the Aboriginal Cultural Heritage Assessment is used to develop interpretive signage to be located in the public spaces of the URA.

#### 7.11 Stormwater Management and Flood Minimisation

#### 7.11.1 Objectives

- i. To manage stormwater flow paths and systems to ensure development does not increase the flood risks and safety of people, property and the environment.
- ii. To minimise any impacts on natural watercourses and associated ecosystems during stormwater events.
- iii. To ensure that development does not increase flood risk on existing or adjoining properties.
- iv. To encourage the reuse of stormwater generated by development.
- v. To achieve a neutral or reduced post development stormwater sedimentation and pollutant load when compared to pre development conditions.
- vi. To minimise soil erosion and sedimentation resulting during and post construction.





7.11.2 Performance criteria and acceptable solutions

#### **Performance Criteria**

## **Acceptable Solutions**

P17 Stormwater flows and quality is managed using Water Sensitive Urban Design (WSUD) principles.

- A17.1 Development Applications must be supported by a Concept Stormwater Plan. The Concept Stormwater Plan must demonstrate:
  - WSUD principles (including on-site stormwater detention/retention) as per Chapter G2: Sustainable Stormwater Management and Erosion and Sediment Control.
  - Stormwater management primarily within the street network.
- A17.2 Stormwater management is to be designed and implemented within the URA boundaries unless the following can be demonstrated:
  - suitable topography;
  - good access to the WSUD / drainage infrastructure;
  - ability to be combined with an adjacent WSUD element;
  - ensure that flow rates and water quality do not adversely impact the waterway reach from the site to the offsite WSUD element; and
  - WSUD element is increased in size to cater for the additional catchment.
- A17.3 WSUD measures are operational no earlier than 90% completion to avoid any bio-retention/filtration basins or wetlands being compromised.

- P18 Manage stormwater flow as a result of A18.1 flood events to minimise risk of flooding to residential accommodation.
- 'Minor' flows are managed using piped systems for the 18.13% Annual Exceedance Probability (AEP) (5 year Average Recurrence Interval) (residential accommodation) and 10% AEP (10 year Average Recurrence Interval) (mixed use development / commercial premises). Management measures shall be designed to:
  - control stormwater to minimise localised flooding and reduce nuisance flows;
  - provide sufficient on-site storage to match pre peak flow rates for the 50% AEP (1.5 year), 18.13% AEP (5 year) and 5% AEP (20 year) rain events;
  - ensure that the duration of stream forming flows are no greater than 2 times the pre-development duration of stream forming flows at the site discharge point;
  - encourage the installation of rainwater tanks for residential accommodation that meet a portion of supply such as outdoor use, toilets, laundry;
  - capture and retain a high level of urban water run-off pollutants to protect local watercourses;
  - include sufficient WSUD elements to achieve the water quality targets listed in the table below.

Pollutant	Reduction
Gross pollutants	90%
Total Suspended Solids	85%
Total Phosphorus	65%
Total Nitrogen	45%
Total Hydrocarbons	0%

A18.2 Major 'flows' are managed using dedicated overland flow paths such as open space areas, roads and riparian

corridors for all flows in excess of the pipe drainage system capacity and above the 18.13% AEP (5 year Average Recurrence Interval). Management measures shall be designed to:

- prevent both short term and long term inundation of habitable dwellings;
- control localised flooding from storm events to maintain access to lots, maintain the stability of the land form and to control erosion;
- habitable floor levels to have a minimum of 0.5m freeboard above the 1% AEP (100 year) flood level;
- ensure that any proposed filing does not cause unacceptable afflux to adjacent properties for all events up to and including the probable maximum flood;
- provide for the orderly and safe evacuation of people away from rising floodwaters by providing reliable access ensuring that the water depth – velocity product is no greater than 0.3m²/s for events up to 1% AEP (100 year) storm;
- provide sufficient on-site storage to match pre development peak flow rates for the 1% AEP (100 year) rain event. This will be achieved using detention storage within water quality features and detention basins.
- A18.3 Management measures for minor and major flows (including WSUD elements) must not result in obstruction / redirection of flood waters as per Chapter G9: Development on Flood Prone Land.
- P19 Stormwater outlets are engineered to A19.1 Stormwater outlets include an mimic pre development flow conditions.

  appropriate flow spreader/energy dissipater to replicate pre development flow conditions.
- P20 Development of the site results in A20.1 Stormwater discharge is designed to improved benefit from stormwater achieve targeted reductions as per discharged into natural watercourses.

  Chapter G2: Sustainable Stormwater

Management and Erosion and Sediment Control.

## 7.12 Residential Development

## 7.12.1 Objectives

- i. To provide a mix of densities to cater for the various housing needs of a range of different demographic groups.
- ii. To encourage residential development that will contribute to the amenity and streetscape character of the area.
- iii. To encourage innovative design with a high level of water and energy efficiency.
- iv. To have higher density housing in the central area of the URA nearby public open spaces and in close proximity to main streets.
- v. To encourage the delivery of a small housing products that can contribute to affordable housing.





#### 7.12.2 Performance criteria and acceptable solutions

#### **Performance Criteria**

#### **Acceptable Solutions**

P21 Design of residential development a contributes to the character and amenity of the URA.

development A21.1 Dwellings are designed in accordance nd amenity of with the relevant controls in **Table 7**.

**Note:** In addition to the provisions outlined in this Chapter, you must refer to the provisions of the Generic Chapters as relevant. In the event of any inconsistency, the provisions in this Chapter will prevail.

P22 Dwellings appropriately address the A22.1 primary street frontage.

Dwellings are sited to face the street, with visible front entries and habitable rooms fronting the street, particularly at ground level.

A22.2 The primary street façade of a dwelling incorporates at least two of the following

design features as part of the articulation zone:

- Entry feature or porch.
- Awnings or other features over windows.
- Balcony treatment to first floor element.
- Recessing or projecting architectural elements.
- Open verandah.
- Bay windows or similar features.
- Verandahs, pergolas or similar features above garage doors.
- A22.3 Dwellings with dual road frontage (corner lots and rear loaded lots):
  - Must address both the primary and secondary road frontage.
  - The secondary road frontage must incorporate at least two of the design features mentioned in A22.2.
  - Landscaping in the front setback should continue around the secondary setback to the depth of the transition zone (refer to Section 7.13 of this Chapter).
  - On corner lots, carports and garages must be located and accessed from the secondary road frontage.
  - On rear loaded lots, carports and garages must be located and accessed from the laneway.
- P23 Zero lot line developments provide adequate solar access and amenity to neighbouring residences.
- A23.1 Dwellings built to the zero lot line are single storey.

**Note**: Zero lot lines are not permitted where an easement to drain sewage is within the side setback.

- A23.2 The external zero lot line wall shall be constructed no more than 250mm from the property boundary.
- A23.3 Gutter and drainage services must be wholly contained within the allotment.

	A23.4 A boundary fence shall not be constructed adjacent to the zero lot line wall.
	A23.5 Zero lot boundary wall finishes consider the character of the development on the neighbouring property which exists at the time of the DA.
P24 Parking and access is to be functional and contribute to streetscape and laneway amenity.	A24.1 On-site car parking is provided in accordance in Chapter G21: Car Parking and Traffic.
	A24.2 Carports and garages are to complement the dwelling design.
	A24.3 Where garages are provided in rear laneways:
	<ul> <li>Minimum garage doorway widths are 2.4m (single) and 4.8m (double).</li> </ul>
	<ul> <li>Garage location is based on the orientation of the allotment (refer to Figure 20), so as to improve solar access to the rear yard.</li> </ul>
	<ul> <li>General vehicular access is to occur from the laneway.</li> </ul>
	<ul> <li>Vehicle crossings are not to exceed 3m wide in streets or 4.8m wide in lanes.</li> </ul>
	A24.4 Triple fronted garages are not permitted.
P25 Development on corner lots contribute to streetscape character.	A25.1 Walls facing the secondary frontage (corner lots) shall have an active frontage for at least 4m back from the front building line of the house (i.e. at least one window) with a maximum continuous wall length of 6m.

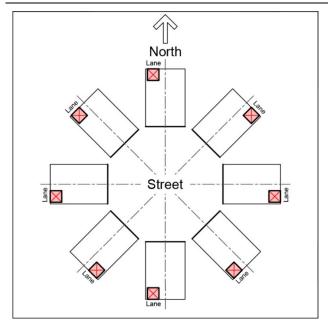




Figure 20 - Garage Location Principles

P26 Dwellings are designed to maximise energy efficiency.

- A26.1 Dwellings and private open space is sited as per the orientation of the dwelling (refer to **Figure 21**).
- A26.2 Dwellings on lots less than 400m² in area are single storey, unless proposed as Integrated Housing with two or more dwellings.

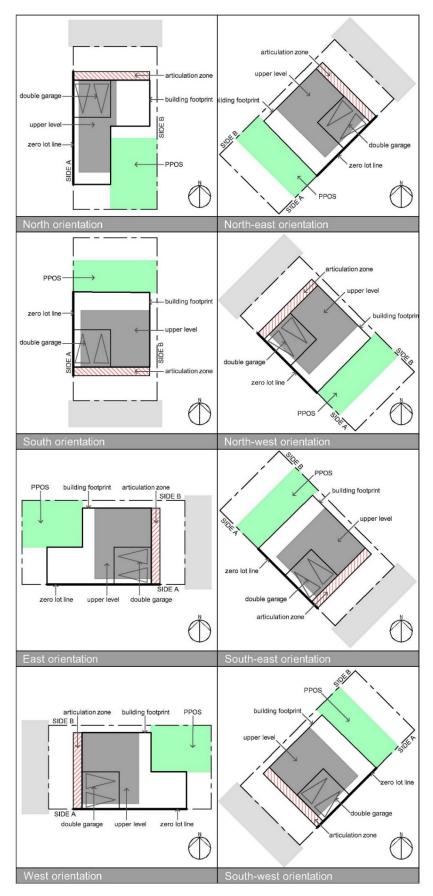


Figure 21 – Dwelling configuration based on orientation

Table 7 - Key Development Controls for Residential Dwellings

Built Form Controls - Lot width (measured at front setback line)				
Control	>8m to <12m	>12m to <15m	>15m to <18m	>18m (Large Lot)
Maximum Gross Floor Area (GFA) (excluding garage floor space)	50% of lot area	Ground floor (single storey) – 50% of lot area	Ground floor (single storey) – 50% of lot area	Ground floor (single storey) – 50% of lot area
		Ground floor (double storey) – 40% of lot area Upper level –	Ground floor (double storey) – 40% of lot area	Ground floor (double storey) – 40% of lot area
		50% of ground floor GFA	Upper level – 50% of ground floor GFA	Upper level – 50% of ground floor GFA
Front setback – refer to Figure 22	3.5m to building façade front setback; 2.5m	3.5m to building façade front setback; 2.5m to	4m to building façade front setback; 3m to	5m to building façade front setback; 4m to
Note: Minimum front setbacks must not encroach into an easement to drain sewage.	to articulation zone.	articulation zone.	articulation zone.	articulation zone.
Minimum front garage setback – refer to Figure 22	N/A	4.5m	5m	6m

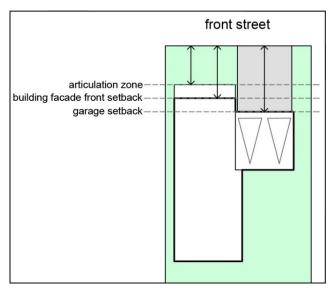


Figure 22 - Location of setbacks

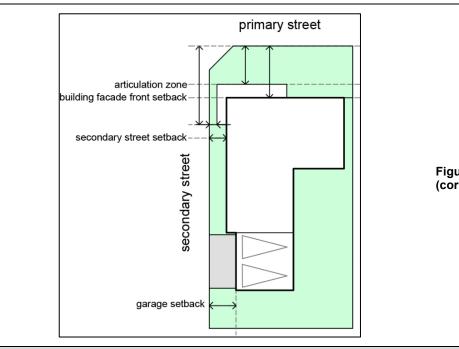


Figure 23 - Location of setbacks (corner lots)

Built Form Controls Continued				
Control	>8m to <12m	>12m to <15m	>15m to <18m	>18m (Large Lot)
Minimum side setbacks (ground floor)	Zero lot or attached boundary (Side A*): 0m  Detached boundary (Side B*): 0.9m	Zero lot or attached boundary (Side A*): 0m  Detached boundary(Side B*): 0.9m	Side A*:0.9m Side B*:0.9m	Side A*:1.5m Side B*:1.5m
Minimum side setback (upper level)	N/A	Side A:1.5m Side B: 0.9m	Side A:1.5m Side B: 0.9m	Side A:3m Side B:1.5m
Minimum rear setback (single storey)	3m	3m	3m	6m
Minimum rear setback (double storey)	N/A	6m	6m	9m
Corner lots – Minimum secondary street side setback – refer to Figure 23	2.5m	2.5m	3m	4.5m
Note: Minimum front setbacks must not encroach into an easement to drain sewage.				

Corner lots – Minimum	3.5m	3.5m	4m	5.5m
secondary street				
garage setback – refer				
to Figure 23				

<sup>\*</sup> Side boundary A and side boundary B are nominated by the applicant or nominated on the plan of subdivision.

Where the boundaries are nominated by the applicant the following criteria must be applied:

- a) where the adjoining development is built to the boundary this boundary is to be nominated as Side A.
- b) where the adjoining development is setback less than 1.5m from the boundary but not built to the boundary, this boundary is to be nominated as Side B,
- c) where the lot is burdened by an easement of maintenance and support or easement to drain sewage, this boundary is to be nominated Side B,
- d) where there is adjoining development only on one side, the other side is to be nominated the alternate,
- e) a corner lot has two side boundaries and no rear boundary,

f) where the lot is located on a corner, the secondary street side setback is neither Side A nor Side B.				
Front Garages				
Control	>8m to <12m	>12m to <15m	>15m to <18m	>18m (Large Lot)
Maximum garage door width	N/A	Double – 6m	Up to 50% of the façade width or a maximum of 7.2m, whichever is the lesser	Up to 50% of the façade width or a maximum of 7.2m, whichever is the lesser
Maximum driveway width (at front property boundary)	N/A	4.8m (double) 3m (single)	4.8m	4.8m
Maximum garage door width (access from secondary road only – corner lots)	N/A	7.2m max	7.2m	7.2m
Rear Garages – small	ots only			
Control	>8m to <12m	>12m to <15m	>15m to <18m	>18m (Large Lot)
Minimum side setback	Om on one side (as per <b>Figure 20</b> ) for a maximum length of 6.5m.  Other side 0.9m.	Om on one side (as per <b>Figure 20</b> ) for a maximum length of 6.5m.  Other side 0.9m.	N/A	N/A

Minimum rear garage	0.5m	0.5m	N/A	N/A
setback (to lane)				
Landscape controls				
Control	>8m to <12m	>12m to <15m	>15m to <18m	>18m (Large Lot)
Landscaped area (min. 1.5m wide)	50% of lot area minus 100m²	50% of lot area minus 100m <sup>2</sup>	50% of lot area minus 100m²	50% of lot area minus 100m²
Landscaped area within front setback (min. 1.5m wide)	75% of area of the front setback (excluding articulation elements)	50% of area of the front setback (excluding articulation elements)	50% of area of the front setback (excluding articulation elements)	50% of area of the front setback (excluding articulation elements)
Provision of tree planting	Tree to front garden (min.3-5m mature height) Tree to rear garden (min. 8-10m mature height)			
Amenity controls				
Control	>8m to <12m	>12m to <15m	>15m to <18m	>18m (Large Lot)
Window, doors and other openings	No windows, openings in any w 900mm from the	doors or other vall that is less than boundary.	N/A	N/A
Minimum ceiling heights*	Habitable rooms – 2.7m Habitable attics – 2.4m for at least two-thirds of the floor area of the room			
* When calculating the area of a room in an attic, any part where the ceiling height is less than 1.8m is not included for the purposes of calculating gross floor area. For alterations and additions existing ceiling heights can be retained.				
Maximum depth of habitable room from a primary window	6m			

# 7.13 Fencing

# 7.13.1 Objectives

- i. To ensure boundary fencing is of a high quality, promotes safety and surveillance and does not detract from the streetscape or public open space areas.
- ii. To ensure boundary treatments contribute to the desired character of the URA.





## 7.13.2 Performance Criteria and Acceptable Solutions

## **Performance Criteria**

# P27 Fences and walls adjacent to the public A27.1 Front fences and walls forward of the domain: building line (see Area 1 - Figure

- Enable some outlook from buildings to the street for safety and surveillance.
- Contributes to safety and amenity of public open space.
- Assist, where appropriate, in highlighting entrances and in creating a sense of communal identity within the streetscape.
- Are designed and detailed to provide visual interest to the streetscape.
- Are constructed of materials compatible with:
  - Existing and proposed housing, and
  - High quality existing fences and walls in the streetscape to encourage continuity.
- Are compatible with facilities in the street frontage area, such as mailboxes and waste collection points.

## **Acceptable Solutions**

- 27.1 Front fences and walls forward of the building line, (see Area 1 Figure 24), should be no higher than 1.2m. The fence must contain open elements that make it at least 50% transparent, or where there are solid panels, must contain articulated elements such as landscape screening, setbacks and varied materials.
- in A27.2 On a corner lot, the fence along the secondary frontage, including the fence in front of and 4m behind the front building line (the "transition zone" see Area 2 Figure 24):
  - Should be no higher than 1.2m; and
  - Should be a continuation of the fence or landscaping on the primary street frontage; and
  - Must contain open elements that make it at least 50% transparent, or where there are solid panels, must contain articulated elements such as landscape screening, setbacks and varied materials.
  - A27.3 Fences beyond the "transition zone" along the secondary frontage and/or along a rear boundary adjacent to the public domain/public open space (see Area 3 Figure 24):
    - Should be no higher than 1.8m; and
    - Must contain open elements that make it at least 50% transparent or,

- where there are solid panels, must contain articulated elements such as landscape screening, setbacks and varied materials.
- A27.4 Fencing is to be of high quality material and finish. The use of metal fencing materials is discouraged directly adjacent to the public domain, except adjacent to laneways.
- A27.5 Front fences and walls should be designed to use similar or compatible materials to that used for the dwelling on the subject lot.
- A27.6 Fences in large lot residential areas (the outer areas of the URA) are encouraged to use semi-rural post and wire or post and rail fencing to blend in with the adjoining rural landscape.

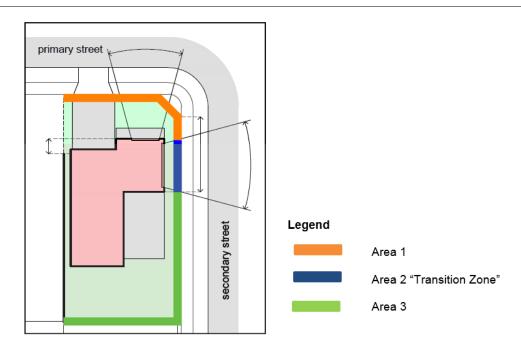


Figure 24 - Location of Fencing "Areas"

## 8 Advisory Information

## 8.1 Information required with subdivision applications

#### Subdivision Plans

Must demonstrate the location of proposed or potential zero-allotments.

## **Staging Plans**

All subdivision applications must demonstrate consistency with the indicative staging plan at **Figure 3** in this DCP Chapter. Staging plans must identify the indicative dwelling yield and provision of infrastructure to be delivered for that stage of the development.

## **Design Verification Statement (DVS)**

A DVS is a document that provides clear and sound reasoning on how the proposed development meets the relevant objectives, performance criteria and acceptable solutions of this Chapter.

A DVS is required to support a subdivision DA which includes small lots as per Shoalhaven LEP 2014.

The DVS must include but is not limited to:

- A description of the proposed development (except for where the DVS is contained within a Statement of Environmental Effects).
- A robust explanation of the design of the subdivision and how it meets the individual key development outcomes (refer to **Section 6** of this Chapter).
- Identify and justify any variations to the ILP.

#### 8.2 Other legislation you may need to check

Shoalhaven Contributions Plan 2010
Moss Vale Road South Species List
Shoalhaven Weed Management
• Nil
Environmental Planning and Assessment Act 1979
Biodiversity Conservation Act 2016
Water Management Act 2000
Shoalhaven Local Environmental Plan 2014