NOWRA CBD FRINGE
MEDIUM DENSITY STUDY

Background Report (Revision 3)

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Prepared for Shoalhaven City Council
by Studio GL

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NOTE: The location and height of existing built form and trees has been approximated from high resolution aerial photography (nearmap.com) site visits and Google Streetview. The cadastre boundaries are based on Council's LEP mapping. The information in this document has been provided for context purposes and is indicative only. This document takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

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CHAPTER 1
SITE ANALYSIS

The study area

The study area, to the west and south of the CBD business core, is one of the oldest parts of Nowra. The street pattern, laid out in the early 1850's is a regular 200 x 200m grid running north-south, east-west, typical for the time and based on Governor Darling's set of rules for laying out of towns. To the west of the study area lies the Nowra Creek natural bushland, walking tracks and the hanging rock lookout.

In total, the study area comprises approximately 25 blocks with one arterial road (Princes Highway), 21 collector streets (20m wide), 13 secondary streets (15m wide), one lane (5m wide) and approximately 1,000 buildings. Most of the properties are residential typologies but the study area also includes schools, churches, a cemetery, a number of parks and some utility areas.

Overall, the land slopes towards the eastern flood plain and the Shoalhaven River to the north. Significantly steeper terrain lies to the west of the study area towards Nowra Creek, offering long distance views across the river valley towards the mountain ranges and escarpment.

The urban grid of Nowra was laid out by the Surveyor, Thomas Mann, in 1852 at the edge of the floodplains adjacent to the Shoalhaven River. After major floods in 1860 and 1870 which destroyed parts of the settlements of Terara and Numbaa, Nowra was situated on higher ground and grew in size.

Existing heritage listed building supporting the local character

Image of new development supporting the local character

Timber, single storey building with gable roof

Single storey buildings & tall street trees line the wide roads

01 SITE ANALYSIS

Figure 1 Aerial map

Existing built form

Predominant building heights

Generally buildings in the study area are single storey. This is shown on the adjacent **Figure 2** Built form heights map which indicates the heights of properties within the study area at the end of 2016.

Two storey buildings only make up a small proportion of the properties and the majority are more recent development, often with integrated garaging on the ground floor. Older housing is typically taller than an equivalent modern development due to an elevated ground floor, higher ceiling heights and more steeply pitched roofs.

Footprints

A study of the footprints of buildings within the study area highlights the grid structure of Nowra and illustrates the ratio of building coverage to land.

Lots and buildings are generally rectilinear in shape. The majority of lots have good solar access (orientated north facing or east west). Approximately 25% face south and a small number are orientated at 45° to the road network.

The predominant built form is the detached free standing dwelling house. Front setbacks to these dwelling houses vary considerably, as do the size of the buildings.

The predominant residential dwelling typology in the study area is a detached, timber or brick single storey dwelling with a gable or hipped roof. These dwellings were generally built before the 1940's.

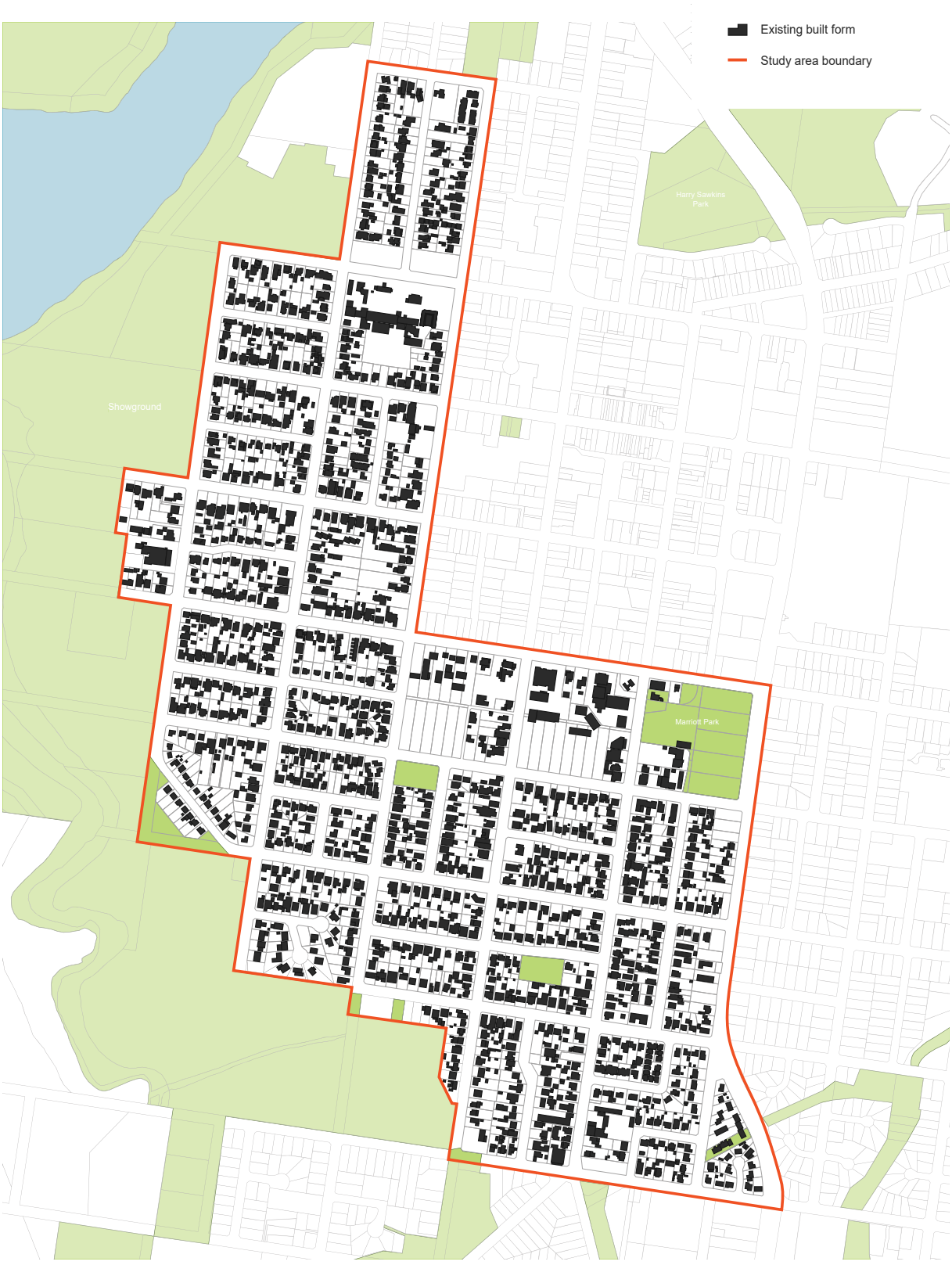


Figure 2 Built form footprints map

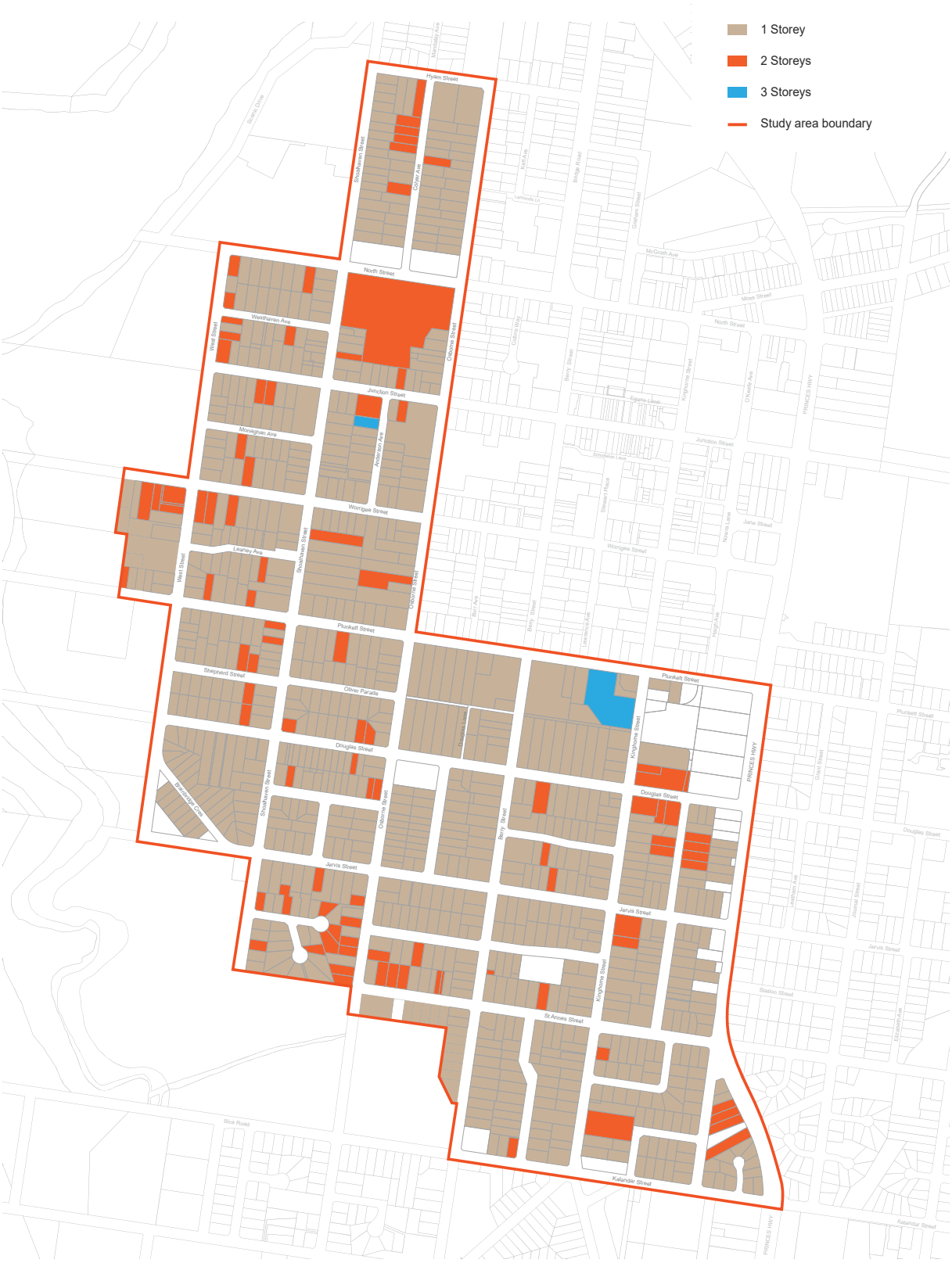


Figure 3 Built form heights map

Built form, age and materials

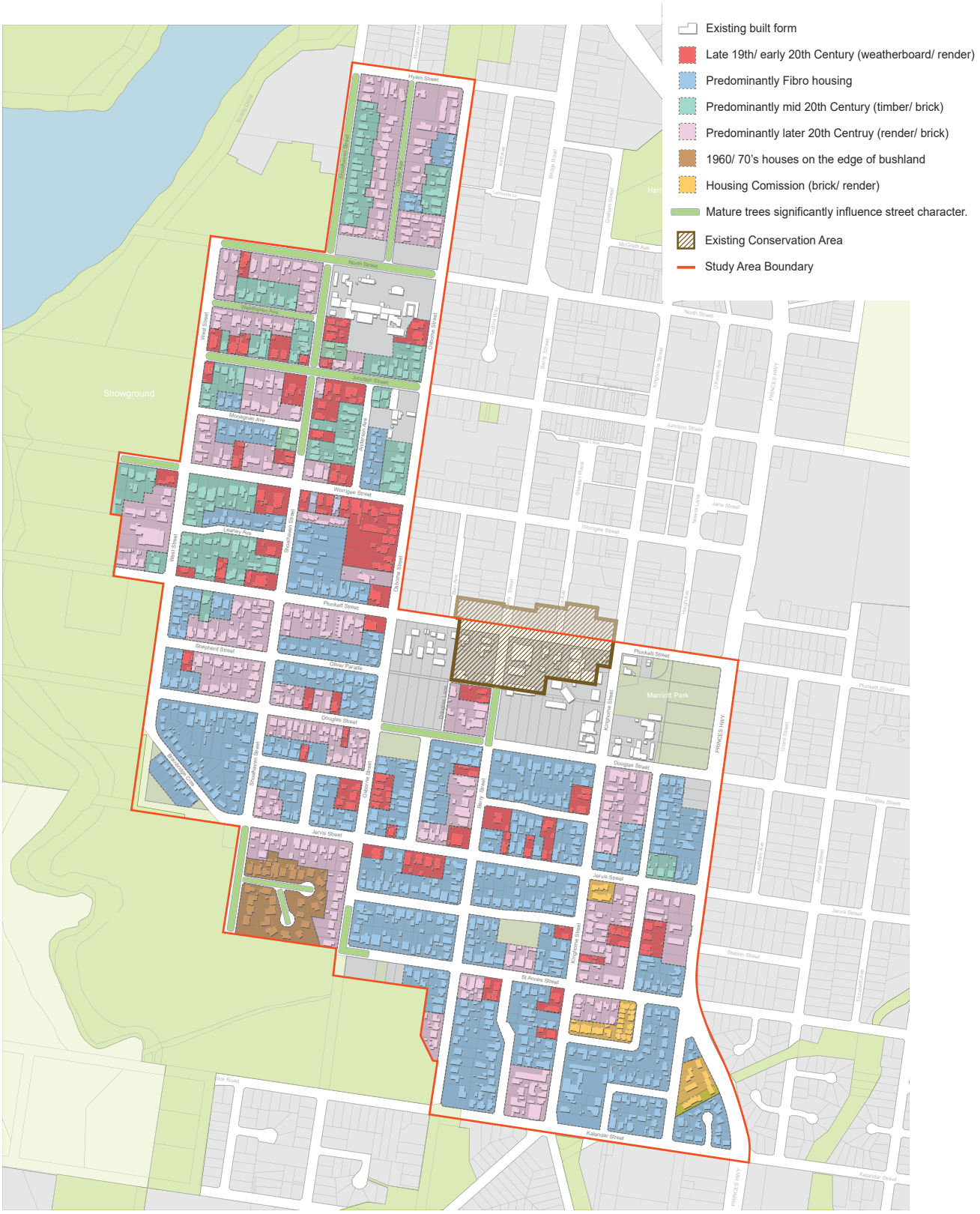


Figure 4 Built form age & materials map

Note: assessment indicative only based on approximate visual survey, does not reflect heritage status of individual buildings or areas

Building use

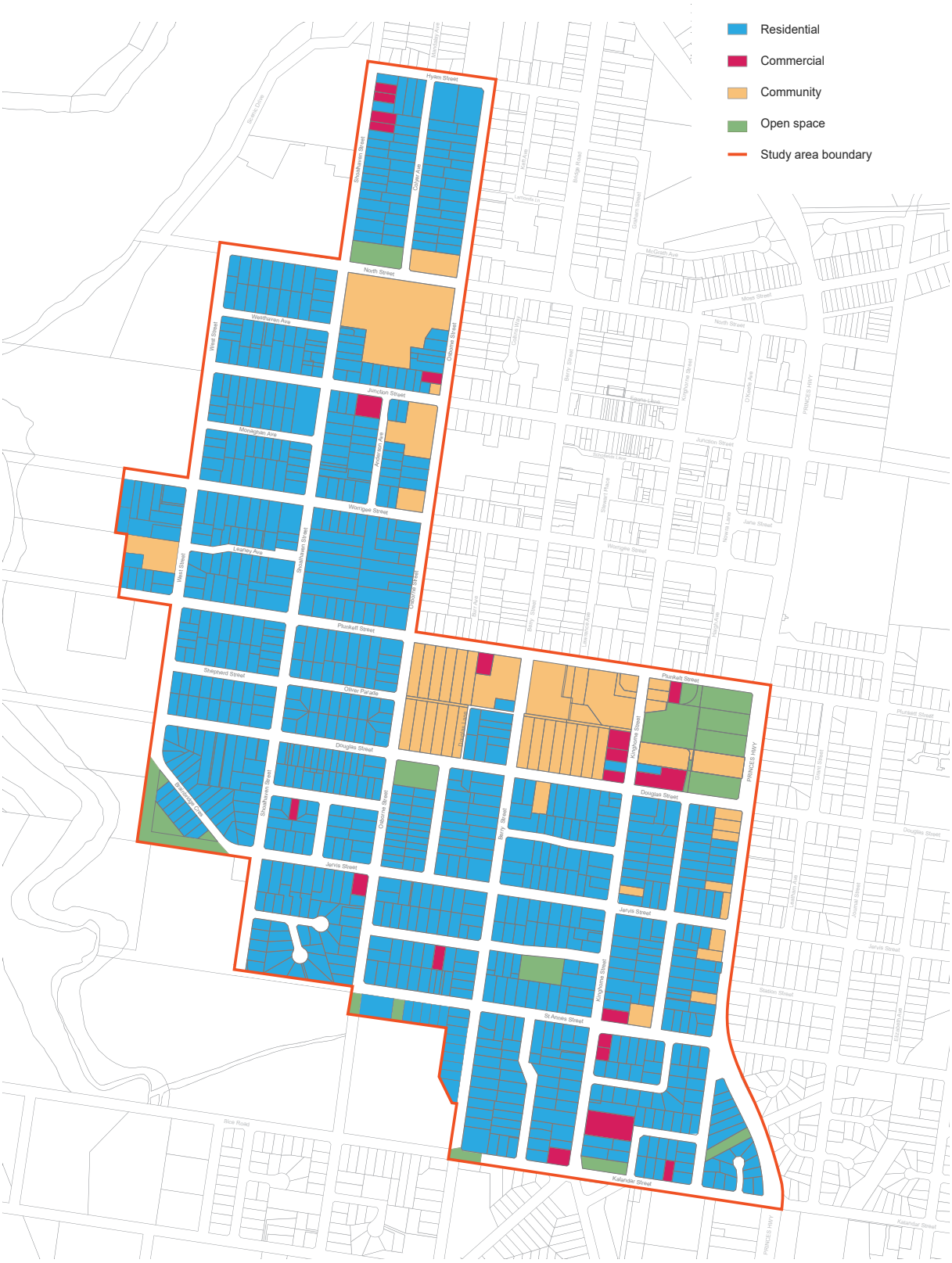


Figure 5 Built form use survey map

Heritage character





Nowra features a number of individual local heritage listed items as well as a small heritage conservation area along Plunkett Street.

The items of heritage significance in this area are almost all houses although street character along Junction Street is also protected. Some of these buildings are currently open to the public for tourist ventures including perennial gardens and living museums while others remain purely residential in nature. There are no identified archaeological or aboriginal sites within the study area.

Figure 6 identifies these items currently listed in the Shoalhaven LEP. It also shows items and zones previously identified as worthy of listing in Nowra's draft Local Environment Plan in 1985.

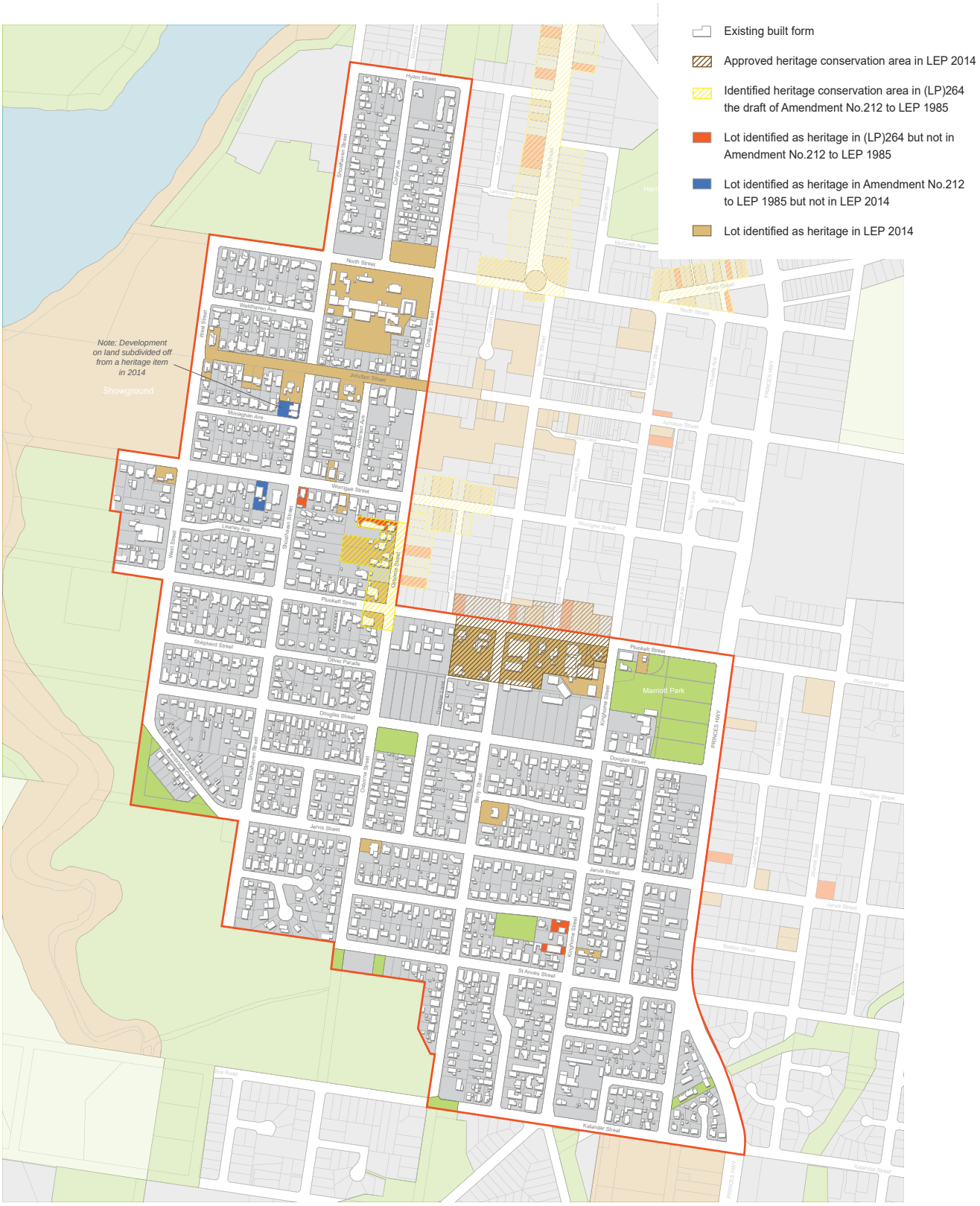


Figure 6 Current and previously proposed heritage items/ areas map

Streetscape character





The streetscape character is influenced by the width of the road and lots, building setbacks, front fences, location of garages and off street parking, building heights, age and style, and the materiality and quality of built form.

The study area generally consists of low scale, residential dwellings with a wide variety of building styles. The majority of the streets have 20m wide road reserves, predominately single storey development with diverse setbacks and some have limited street tree planting. Most front setbacks are landscaped but there are few large trees to the front of properties.

Front fences

Local character is also influenced by the delineation of the front boundary. Many houses in the study area have low picket fences, particularly if the house is of a Victorian or weatherboard style. Hedges also are common often being used to increase the privacy above a low front fence.

Some properties in the study area do not have front fences. When this occurs along adjacent properties there is no clear delineation between the private property and the road and the architecture of the house is more prominent.





Corner buildings

Corner buildings and buildings on a terminating street view tend to be more prominent and play a greater role in defining local character. Within the study area a number of the identified heritage items are located on corner properties. These are often single residences with generous setbacks on large blocks of land.

Newer development has generally taken less advantage of corner sites, other than to utilize the benefit of dual frontage for access to the property, and do not always provide an attractive frontage to both streets.

Garage locations

Off street parking in older properties is typically provided via a long driveway that leads from the street to parking along the side of the building, a covered carport and sometimes to a stand alone garage located in the rear yard. Driveway crossovers and driveways may be concrete, gravel or grass or a mixture of different materials.

More recent developments typically contain garages (single or double) integrated into the house design and wide concrete driveways. Some development locates visitor parking in the front setback although there is generally sufficient street parking along Nowra's wide roads.

Street widths

The majority of roads in the study area are 20m wide. The original grid pattern of 200 x 200 metre blocks is apparent and forms a strong base layout with all the roads that bound the 200x200m block, being 20m wide.

Intermediate, or intra-block, roads are generally a narrower 15m wide in the northern study zone whilst to the south they have generally been developed at 20m width. There are some exceptions especially in the south west area which was developed in the 1970's, which provides 15m wide roads.

Wider roads are more flexible and can accommodate more street parking (i.e. 45/90 degree parking). Depending on the front setback, development on either side of a wide road is more distant and generally feels less "intense". Figure 7 indicates the road reserve width for all streets within the study area and the following page provides examples of typical street sections, that illustrate the effect of differing road reserve widths and differing front setback distances.

Identifying the density of road intersections is a way of indicating the permeability of the urban structure of a particular area. An area with a high intersection density provides options for people and cars to move from one point to another easily while an area with a low intersection density concentrates traffic flows on a few streets and makes it less attractive to walk from one place to another as there is usually a requirement to circumnavigate the large blocks.

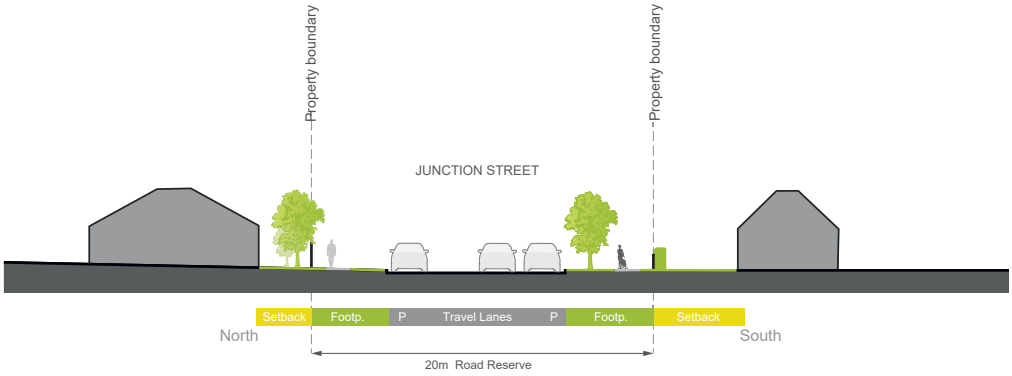
Figure 8 identifies the density of intersections within the study area. It shows that while the study area has a networked grid structure it does not have a particularly intense intersection density due to a lack of permeability created in the original town road layout.

Osborne and Plunkett Streetview

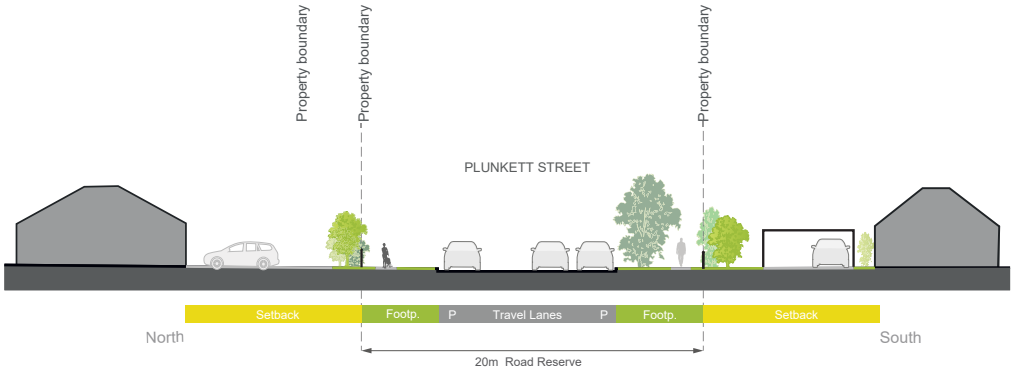
Worigee Streetview

Figure 7 Street widths analysis map

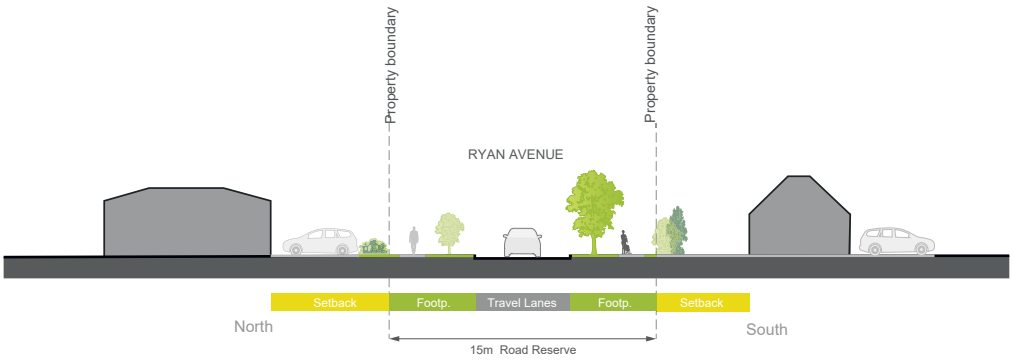
Streetscape sections



Section A: Junction Street near the corner of Shoalhaven Street



Section B: Plunkett Street near the corner of Osborne Street



Section C: Ryan Avenue near the corner of Kinghorne Street

Urban structure and permeability

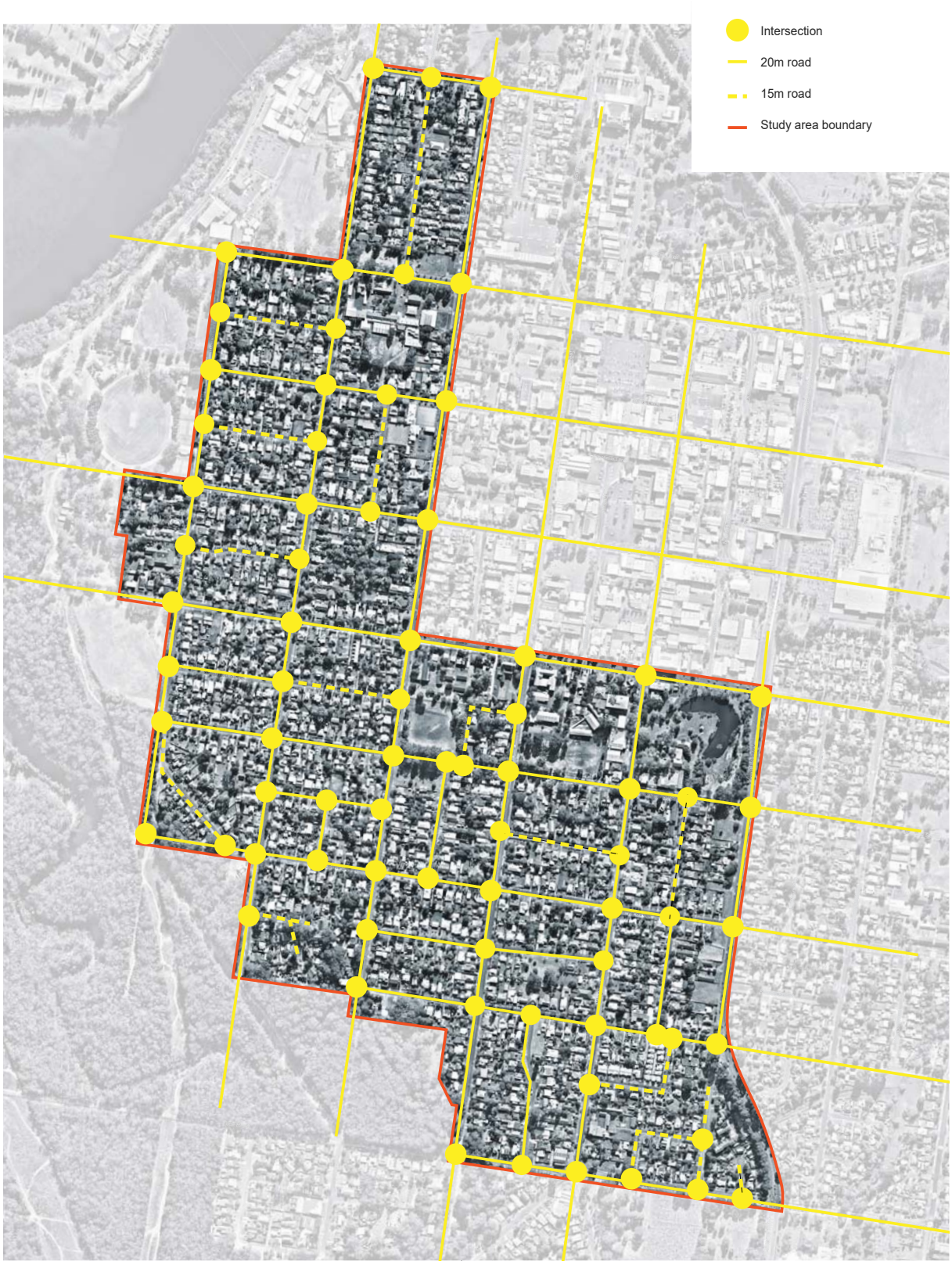


Figure 8 Intersection density analysis map

Topography and landform

The topography of the study area generally slopes gently to the east and the north. The two main high points are situated at the intersections of West Street and Plunkett Street and Kinghorne Street and St Annes Street. Steeper land is located at the southern end of Osbourne Street, and near the intersection of Shepard Street and Shoalhaven Street.

As the urban grid structure is overlayed over the landform, it helps to reveal the high points, ridges and valleys. Many streets or street segments offer views to the scenic rural landscape, the river or the escarpment, while other areas feel more enclosed and are more affected by the quality of surrounding built form.

Some streets capture views to the Cambewarra Range in the north and towards the open district views to the east. The far distant view along these streets draws attention away from the buildings. Some streets in the study area also have attractive street trees including Worrigee, Junction and Kinghorne Streets.

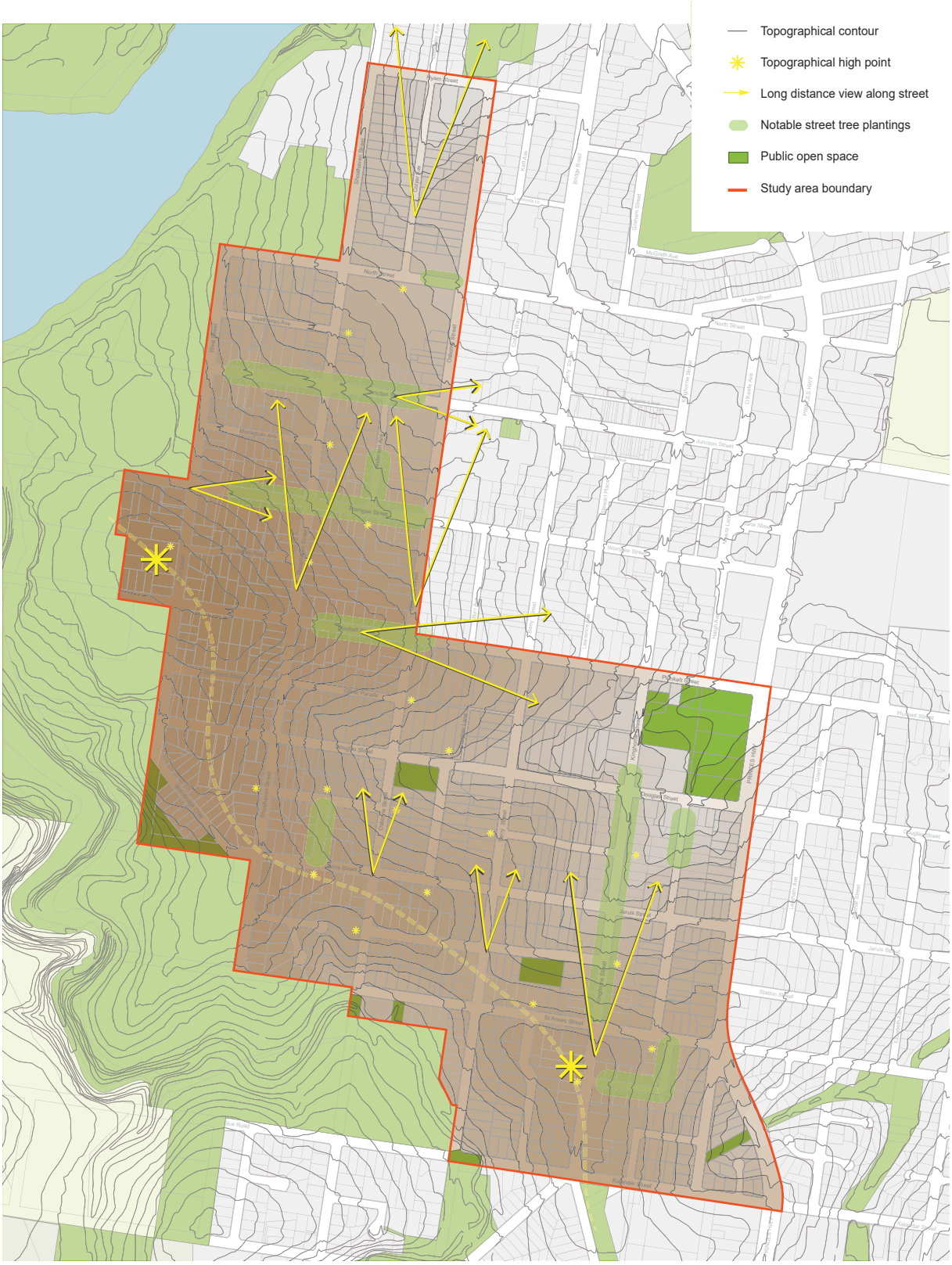


Figure 9 Topography and landform map

Lot orientation

Lot orientation is an important consideration to ensure that living rooms and areas of private open space receive adequate sunshine. Lot orientation (especially when combined with slope) is also critical to the likelihood of development overshadowing of neighbouring properties.

The diagram below, sourced from the Tweed Shire Council DCP, outlines recommendations for development on different block orientations in order to maximise solar access.

The figure below identifies the primary orientation of all properties within the study area. It indicates that approximately fifty percent of the blocks are predominately orientated east west. Properties with this orientation can be vulnerable to overshadowing from taller development to the north.

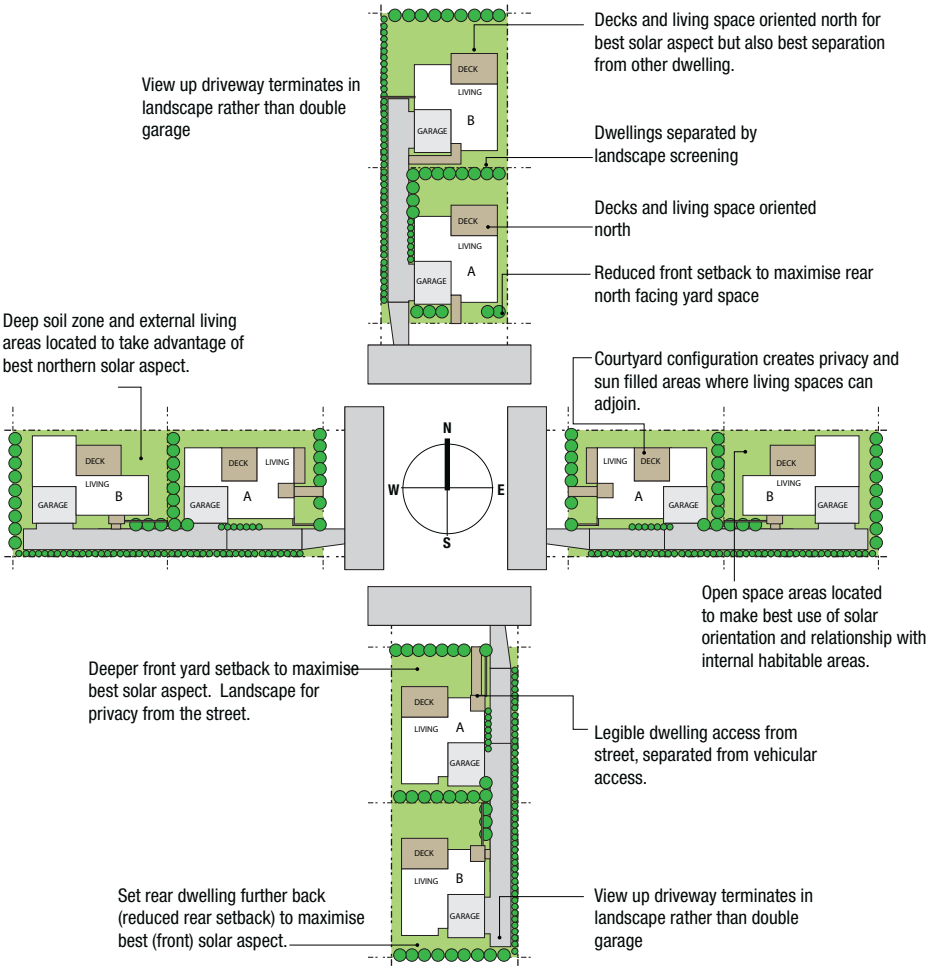


Figure 10 Indicative site configurations for different lot orientations (Source: Tweed Shire DCP)

Figure 11 Block orientation analysis map

CHAPTER 2
POLICY CONTEXT

Shoalhaven LEP 2014

The Shoalhaven Local Environmental Plan (SLEP) commenced in April 2014 and is a statutory plan under Part 3 of the Environmental Planning and Assessment Act 1979.

The document follows the 'Standard Instrument' template provided by the NSW Department of Planning & Environment and incorporates strategic objectives established by State Government and Council, including the implementation of the Nowra-Bomaderry Structure Plan.

The following pages provide overlays of the study area over selected maps of the LEP for easy reference. Below is a summary of the key and most relevant items and provisions.

Land use zones

The predominant land use zoning in the study area is residential. Permitted residential building types within the land use zones R1 General residential, R2 Low density residential and R3 Medium density residential are:

Relevant Uses - permitted with consent	Land Use Zones		
	R1	R2	R3
Dwelling Houses	X	X	
Dual occupancies	X	X	X
Attached Dwellings	X		X
Semi-Detached Dwelling	X		
Multi Dwelling Housing	X		X
Residential Flat Buildings	X		X

Height of buildings

A small portion of the study area has a maximum building height of 7.5m. Approximately a fifth of the study area has a maximum building height of 8.5m. The remainder of the study area has the default maximum building height of 11m.

Lot sizes

Applies To:	Minimum Lot Size
Dual Occupancy development within 'Area1'	350m²
Multi Dwelling Houses within 'Zone R1'	350m²

Dual occupancy

Dual occupancy development is discouraged in zone R3 (medium density Residential) in order to encourage greater dwelling density. Plots must be less than 800sqm and amalgamation with an adjoining lot not considered feasible.

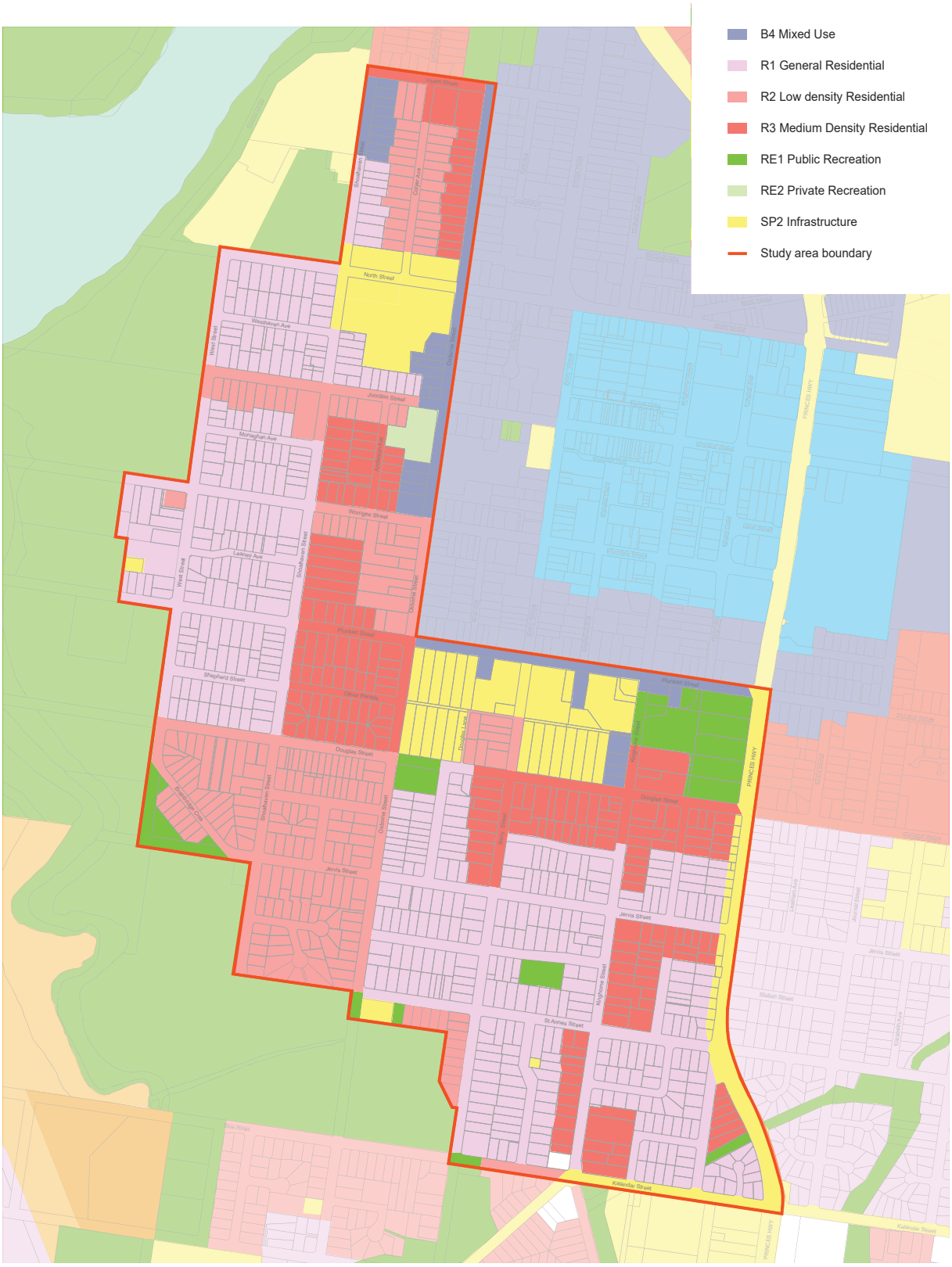


Figure 13 Land use zoning map (information sourced from SLEP 2014)

Figure 12 SLEP 2014 Land Use Zoning diagram

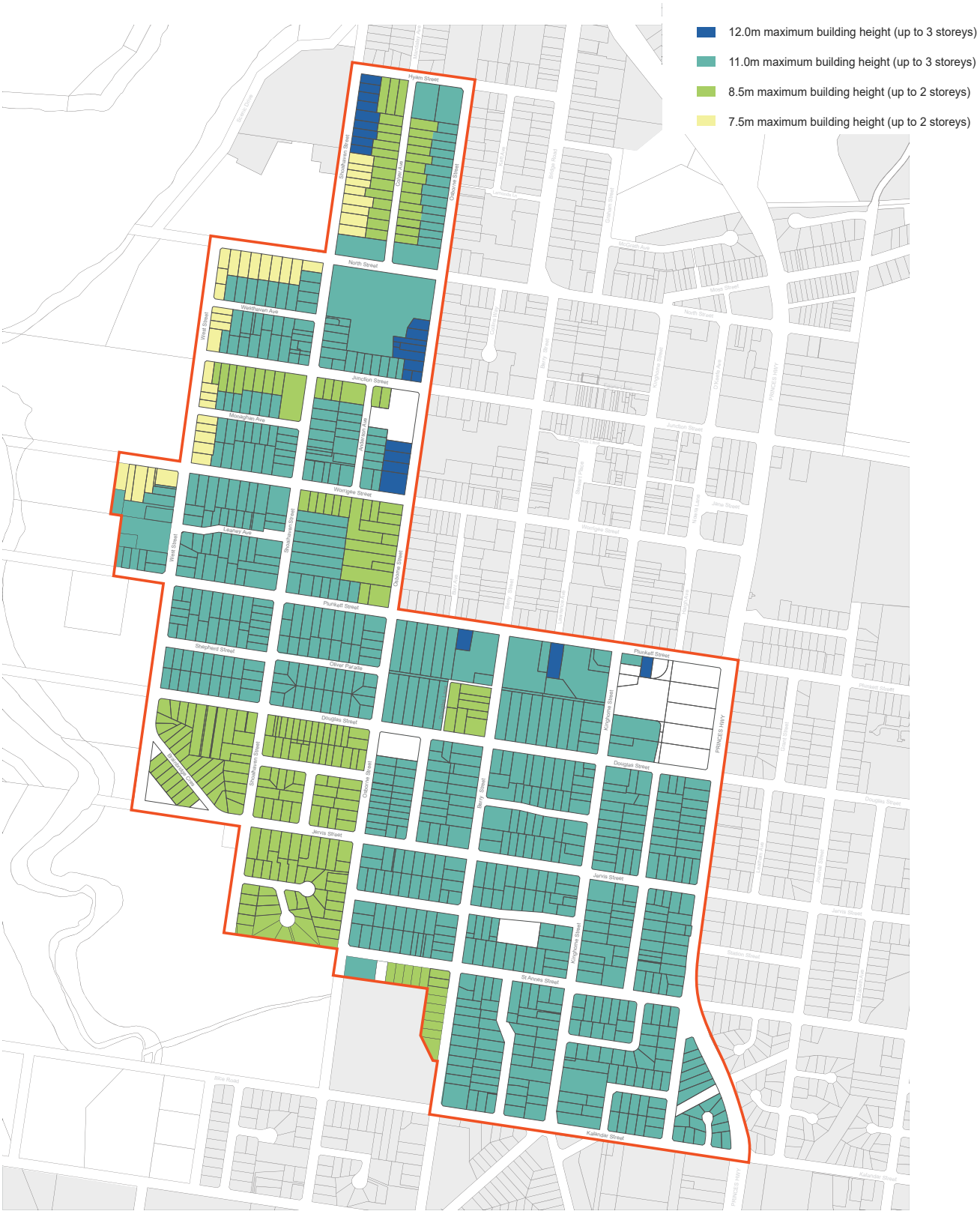


Figure 14 Maximum heights of buildings map (information sourced from SLEP 2014)

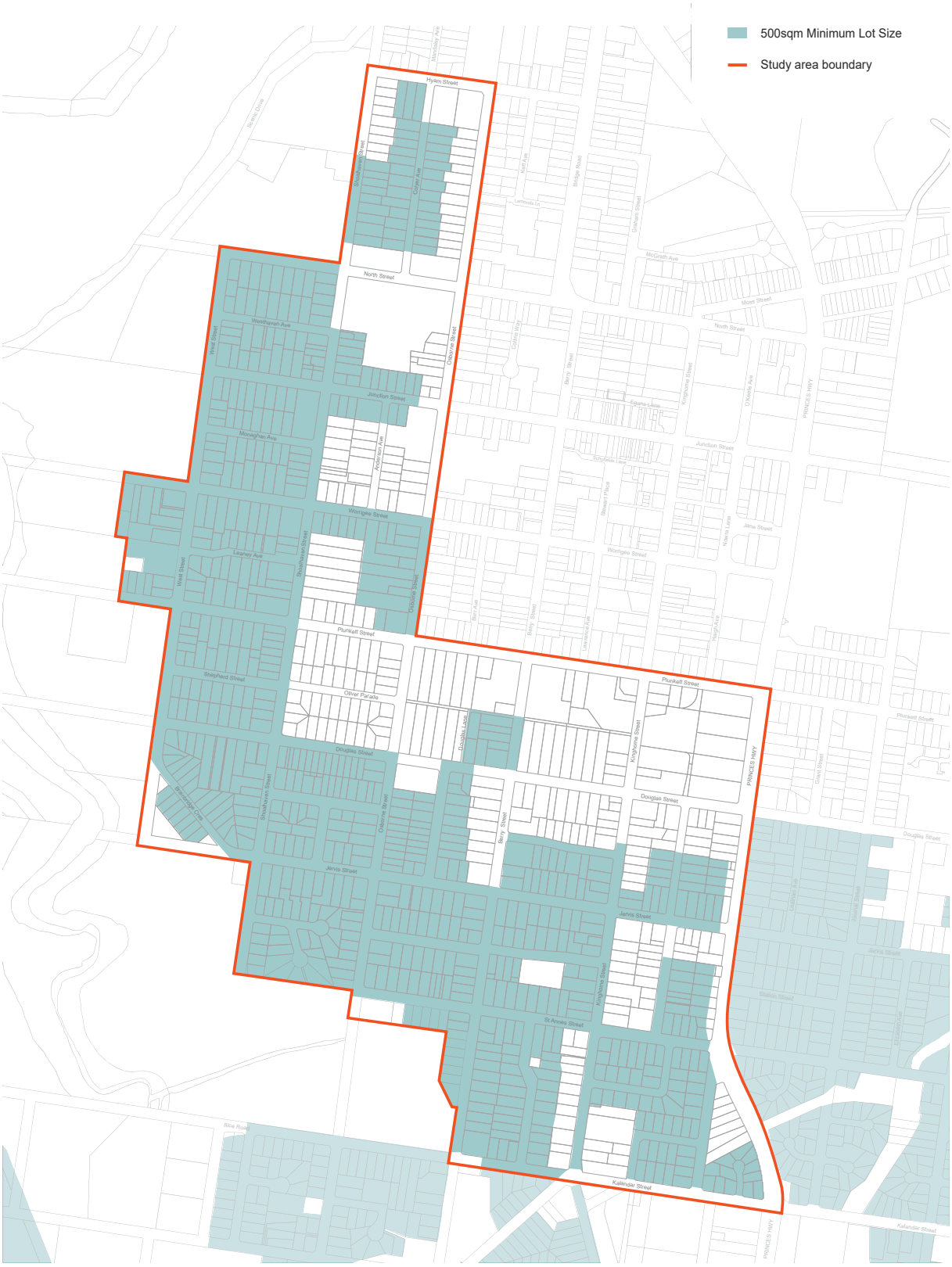


Figure 15 Minimum lot size map (information sourced from SLEP 2014)

Shoalhaven DCP 2014

The Shoalhaven City Council Development Control Plan (DCP) came into effect in October 2014. Key policies from the most relevant chapters are summarised in the sections listed below:

- Chapter G13 Dual Occupancy Development
- Chapter G14 Other Residential Accommodation
- Chapter G21 Car Parking and Traffic

G13 Dual Occupancy development

Minimum lot sizes

Applies To:	Requirement
Attached Dwellings	>500m²
Dual Occupancy	>700m²
Dual Occupancy (Battle Axe Lots)	>1000m²

Height and bulk

The maximum building envelope is set by projecting 45 degree plane at 5m above existing ground level at the front, side and rear boundaries. For detached dual occupancy dwellings the dwelling furthest from the street should be single storey.

Density

The maximum FSR (floor space ratio) for sites up to 1,000m² is 0.5:1.

Cumulative impact

No more than 3 consecutive dual occupancy developments within a street.

Landscaping

A minimum of 30% of the total site area is to be provided as landscaping.

Setbacks

Minimum setback distances within zones R1, R2, R3, and RU5 are as follows:

Applies To:	Front	Side	Rear
New subdivisions, lots in groups, or clusters in subdivisions, approved prior to Feb 2002, and <600sqm	5m	0.9m	3m
New subdivisions >600sqm	6m		
Infill development in existing subdivisions plot depth <30.5m.	6m		
Infill development in existing subdivisions plot depth >30.5m.	7.5m		

Vehicular access

Both dwellings are to use a common access point on single frontage sites.

Private recreation areas

A minimum 50m² private recreation area is required for each dwelling (min. dimension 2m). A portion of this area is required to have minimum dimensions of 5.0x 6.0m.

Design and materials

The cumulative width of Garage façades does not exceed 9m or 50% of the site frontage whichever is the lesser.

Each dwelling is to include at least two of the following elements on the street elevation:

- Front entry door
- Living room window
- Portico, verandah, deck or patio

G14 other residential accommodation

Site planning and layout

Private open space and garages should be located to the rear of dwellings. The driveway alignment should be designed to avoid a gun barrel effect down the side boundary.

Scale and site density

The maximum floorspace ratio is 0.35:1.

A minimum of 35% of the total site area is to be provided as landscaping.

Streetscape and building appearance

Street elevations for all buildings facing public and communal streets show:

- A front door and/or living room windows facing the street.
- Buildings detailed or articulated to enable individual dwellings to be identified from public roads.

Setbacks

Minimum setback distances

Applies to:	Front	Side	Rear
1 Storey	5.5m	1m (1.5m with window to habitable room)	3m
> 1 storey	9m		
Secondary Frontage on corner sites	3m		

In integrated housing developments, walls may be built to internal side and rear boundaries where:

- Maximum wall height is 3.5m unless matching an existing or simultaneously constructed wall; and
- Maximum wall length is 50% of each of the abutting property boundaries.

Building envelope and siting

The maximum building envelope is set by projecting 45 degree plane at 5m above existing ground level at the front, side and rear boundaries.

Views visual privacy and acoustic privacy

Minimum separation distances between windows of habitable rooms of facing dwellings that abut a public or communal street.

Applies to:	Requirement
Ground Floor	9m
1st Floor +	12m

Useable open space

A minimum of 35m² of private open space is to be provided per dwelling with a minimum dimension of 2.5m. One part of the minimum private open space area must have a usable minimum area of 25m^2 and a minimum dimension of 4m. This space must be directly accessible from a living area of the dwelling.

Car parking

Vehicles are able to enter and exit the site in a forward direction and stack (tandem) parking arrangements are avoided. Minimum dimension of entrance ways and driveways to be 3.0m.

Fencing and walls

Front fences and walls should not be higher than 1.2m if solid. (1.8m permeable fences may be permitted in specific situations)

G21 Car Parking and Traffic

Dual occupancy dwellings

Applies to:	Requirement
Dwellings GFA <125m² (except 3 bed units)	1 parking space on site behind the building line
Dwellings GFA >125m²	2 parking spaces on site behind the building line

Multi dwelling housing

Applies to:	Requirement
Dwellings <55m²	1 parking space on site
Dwellings 56-85m²	1.5 parking spaces on site
Dwellings >85m²	2 parking spaces on site

A 30% car parking space discount is to be applied to development within a 200m radius of Nowra CBD.

Parking layout & dimensions:

Stack (tandem) parking of vehicles in not supported by Council unless part of a mixed use, commercial, managed residential development or a mix of these uses with a management plan in place.

Access

Development must be designed so that vehicles enter and leave the premises in a forward direction. Each site must minimise the number of ingress and egress points to any street frontage. Driveways must be located a minimum of 6.0m from the corner of a building located on corner lots.

Loss of on street parking

Where major development/ redevelopment is proposed that has frontage to two or more streets, Council will take into account the loss of on-street car parking spaces arising from the construction of access, bus embayments and car parking restrictions, where these are directly related to the development proposal and will require these to be replaced on site.

Works in kind

The provision of car parking spaces in the road reserve may be considered in lieu of onsite provision. (subject to detailed justification.)

Draft Medium Density Design Guide

In October 2016, the NSW Department of Planning and Environment published the draft Medium Density Design Guide, with the aim to encourage more low rise medium density housing to be built in NSW, providing greater housing choice, more housing affordability and better quality design.

The Design Guide provides benchmarks for designing and assessing low rise (up to 3 storeys) medium density housing types including:

- Terrace style housing on small lots (attached dwellings)
- Dual occupancies and semi-detached dwellings
- Multi-dwelling housing (strata titled terrace housing, villas and townhouses)
- Community titled master-planned medium density developments, and
- Manor homes (comprising 3-4 dwellings)

Where is it likely to be relevant.

The Department states that the Design Guide will be legally enforceable for complying development in areas zoned Medium Density Residential. The following medium density development is expected to be assessable as complying development under the MDDG within the SEPP (Exempt and Complying Development Codes) 2008:

- Two dwellings side by side
- Terrace Houses
- Manor houses

Cover and extract of the recently released draft Medium Density Guide prepared by DP&I

Explanation of intended effects

The Medium Density Design Guide (MDDG) was accompanied by a document intended to explain the effects of the modification to the SEPP. This states that the MDDG would not automatically override council controls and would need to be adopted by reference in a DCP. If the MDDG is adopted it is to be adopted in its entirety to ensure a consistent approach across the state.

This document also states that the MDDG is intended to encourage best practice design of low rise medium density dwellings and that it is used as a tool for designers and councils to encourage high quality, liveable and attractive homes.

Figure 16 Medium density development in the spectrum of residential accommodation (source: Draft Medium Density Guide, page 4)

Selected relevant key design criteria

7.	Private courtyards within the front setback are only to be located within the articulation zones and / or behind the required front building line.
9.	Direct visibility is to be provided to the front door and garage door along paths and driveways from the public domain.
11.	The maximum fence height within the front setback is 1.5m,with an average no greater than 1.2m.
12.	No more than 50% of the allowable fence area should be solid (masonry, timber, metal or stone).
15.	Courtyard fences and walls to secondary street frontages are to align with the facade fronting the street. Where solid it should be the same material as the building facade.
16.	Retaining walls greater than 0.6m within the front setback are to be softened by planting for a minimum depth of 600mm on the low side of the retaining wall
20.	Where driveways are provided as a battle-axe the: • setback from a fence is to be at least 1m • setback from another dwelling is to be at least 1m • setback from a habitable room window is to be at least 3m if the window exceeds 1m².
43.	Measured from finished floor level to finished ceiling level, minimum ceiling heights are: • 2.7m to ground floor habitable rooms • 2.7m to upper level living rooms • 2.4m to upper level habitable rooms (excluding living rooms)
45.	The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 5m² each.
53.	All dwellings are required to have a primary private open space of at least 16m².
54.	The minimum dimension of the included area is 3m, and excludes any storage space.
63.	On-grade car parking, garages and car ports are setback from the boundary to the primary or secondary road by: • If the setback of dwelling is more than 4.5m: 1m behind building line • If the setback of dwelling is less than 4.5m: 5.5m
64.	The maximum aggregated garage door width that has a frontage to a primary road:
81.	An articulation zone of 1.5m is provided forward of the building line. The articulation zones includes one or more of the following: • Verandah / Porch • Balcony • Pergola • Entry feature or portico • Awnings or other features over windows • Eaves and sun shading • Window box treatment • Recessed or projecting architectural elements • Bay window

Lot width	Aggregate garage door width
7.5 - 12.5m	max. 3.2m wide
wider than 12.5m	max. 6.0m wide

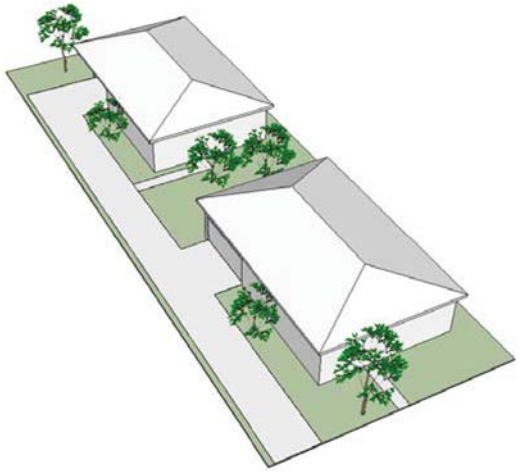
Two Dwellings Detached

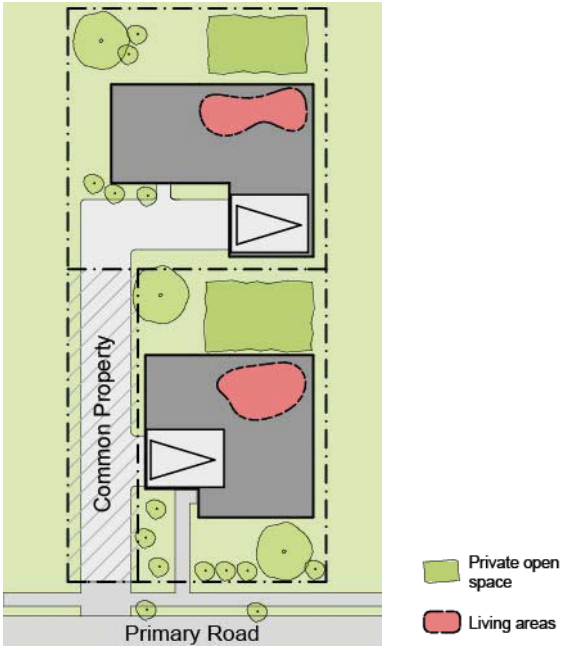
Relevance	Reason
Medium	Will not automatically fall under SEPP but recommended for land zoned low density development

Relevance to Nowra Medium Density Study

- Recommended for land zoned low density development (some of these areas in Nowra have a concentration of heritage buildings).
- Encouraged on corner sites (which generally have a higher visibility)
- The minimum lot size/FSR would generate small dwellings (ie. 200m^2 lot would generally allow a 2 bed dwelling).
- Recommends that controls for setback, bulk, scale, FSR , building height, landscape and private open space should be kept the same as what is prescribed for a single dwelling house in the area. This would result in significantly higher impacts on open space/tree canopy loss due to high impact of car access.
- It is suggested that at a minimum battle-axe access needs to be excluded from calculations.

Typical principal development controls	
Land title:	Torrens or strata
Minimum Lot size	Corner: 200m^2 (each lot) Battleaxe: 300m^2 (each lot)
FSR:	0.4 - 0.5:1
Landscaped area	20 - 50% increases with lot size
Building height	8.5m
Front setback	Average of neighbourhood or 5.5m
Rear setback	3 - 6m
Side Setbacks	Front 15m: 1.2m at front Rear: 2.5m plus 45° height plane
Car parking	1-2 spaces





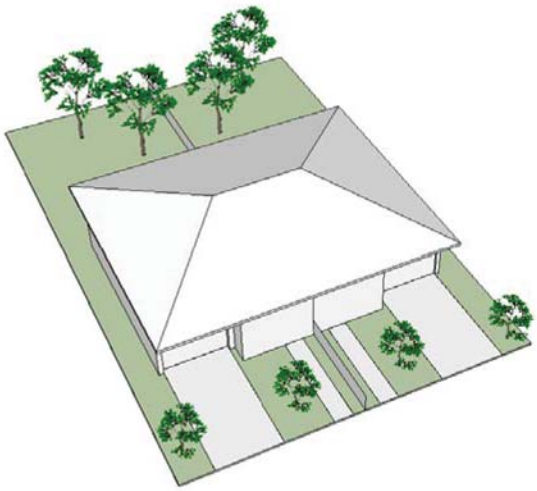
Two Dwellings Side By Side

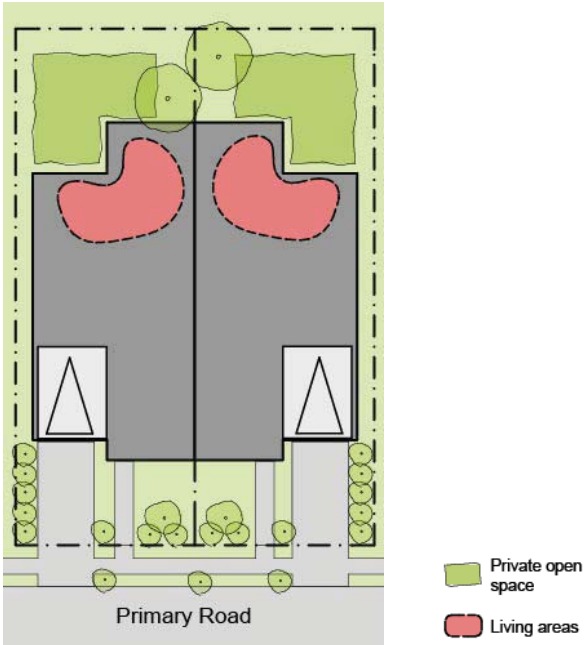
Relevance	Reason
High	Will automatically fall under SEPP in areas zoned for medium density development.

Relevance to Nowra Medium Density Study

- Could be assessed as complying development under SEPP (Exempt and Complying Development Codes) 2008 even if adjoining a heritage building.
- The minimum lot size/FSR would generate medium size dwellings (ie 200m^2 lot would generally allow a 3+ bed dwelling).
- Minimum lot width (7.5m) very narrow for the area.
- Minimum setbacks (side and rear) very small for the local area.
- Minimum lot width/car parking in current DCP could encourage tandem parking arrangements. (ie on lots <12.5m only allow a single width garage but minimum width of lot is 7.5m).

Typical principal development controls	
Land title:	Torrens or strata
Minimum Lot size	200m^2
FSR:	0.55 - 0.70:1
Landscaped area	20 - 50% increases with lot size
Building height	8.5m
Front setback	Average of neighbourhood or 5.5m
Rear setback	3 - 6m
Side Setbacks	Front 15m: 1.2m at front Rear: 3.6m plus 45° height plane
Car parking	1-2 spaces





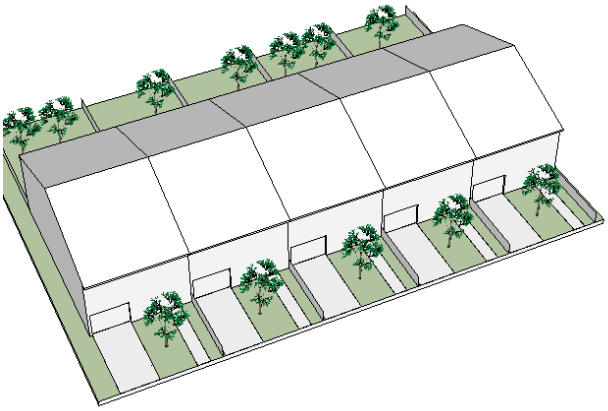
Terrace Houses

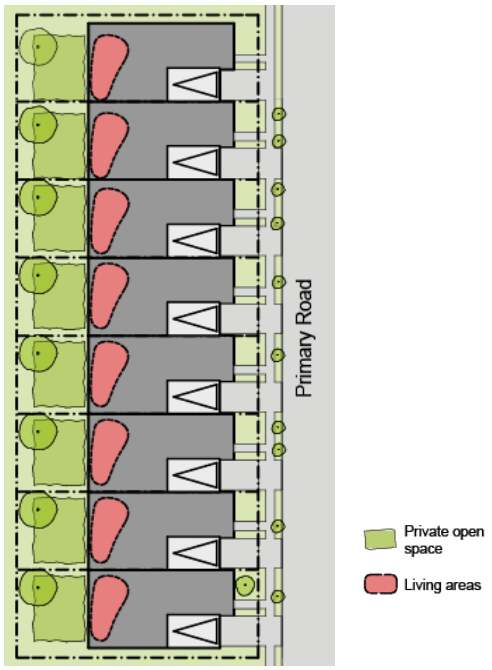
Relevance	Reason
High	Will automatically fall under SEPP in areas zoned for medium density development.

Relevance to Nowra Medium Density Study

- Could be assessed as complying development under SEPP (Exempt and Complying Development Codes) 2008 even if adjoining a heritage building.
- The minimum lot size/FSR would generate higher density of development (ie 150m^2 lot may allow a 3 bed dwelling).
- Minimum lot width (7.5m) very narrow for the local area.
- Minimum setbacks (side and rear) very small for the local area.
- Minimum lot width/car parking in current DCP could result in significant dominance of garaging along the street.
- Could encourage tandem parking arrangements. (ie on lots <12.5m only allow a single width garage but minimum width of lot is 7.5m).

Typical principal development controls	
Land title:	Torrens or strata
Minimum Lot size	150m^2
FSR:	0.55 - 0.75:1
Landscaped area	20 - 50% increases with lot size
Building height	8.5m (2 storey) - 10m (3 storey)
Front setback	Average of neighbourhood or 5.5m 3.5m min allows for landscaped front setback.
Rear setback	3 - 6m
Side Setbacks	Front 15m: 1.2m at front Rear: 3.6m plus 45° height plane Om setbacks for internal boundaries
Car parking	1-2 spaces





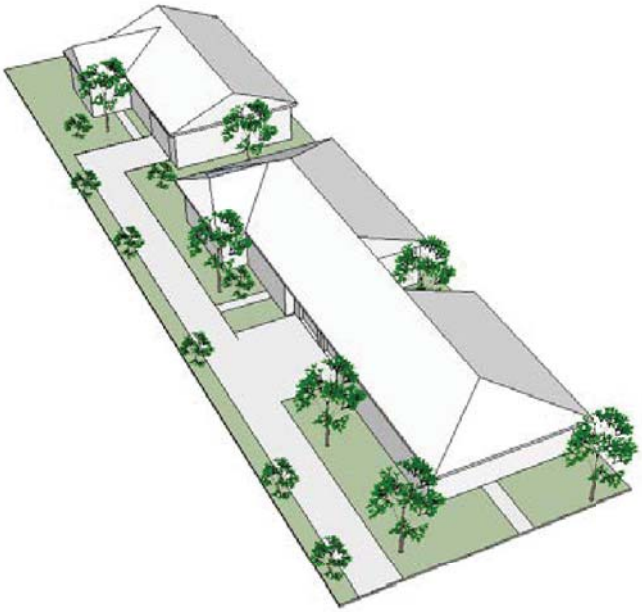
Row Housing

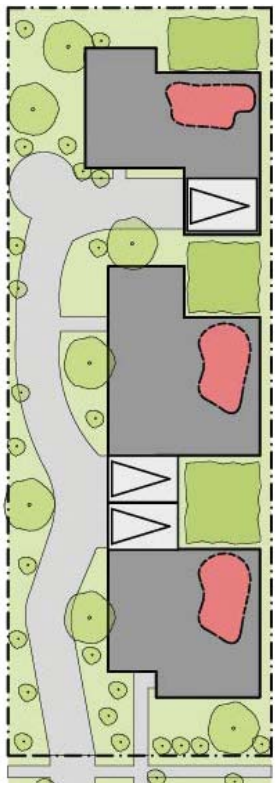
Relevance	Reason
High	This is a popular type of development in the area

Relevance to Nowra Medium Density Study

- This typology is common when lots are long and narrow (which occurs frequently in this part of Nowra).
- The MDDG notes this type of development can enable preservation of the existing streetscape
- The MDDG notes that 17-20m lot width is needed to efficiently plan this type of development.
- Minimum setbacks (side and rear) very small for the local area.
- A large proportion of the site area could become driveway and parking, creating stormwater/ heat island issues and very little deep soil/landscaped areas.

Typical principal development controls	
Land title:	Torrens or strata
Minimum Lot size	on average about 300m² per dwelling
FSR:	0.45-0.5:1
Landscaped area	20 - 50% increases with lot size
Building height	8.5m
Front setback	Average of neighbourhood or 5.5m
Rear setback	3 - 6m
Side Setbacks	Front 15m: 1.2m at front Rear: 4m
Car parking	1-2 spaces





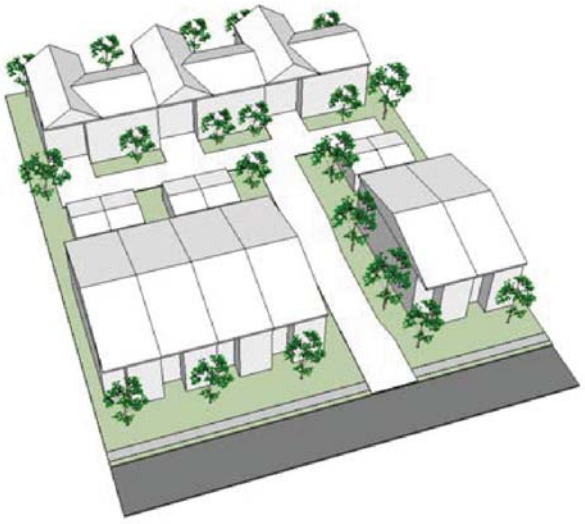
Mews Housing

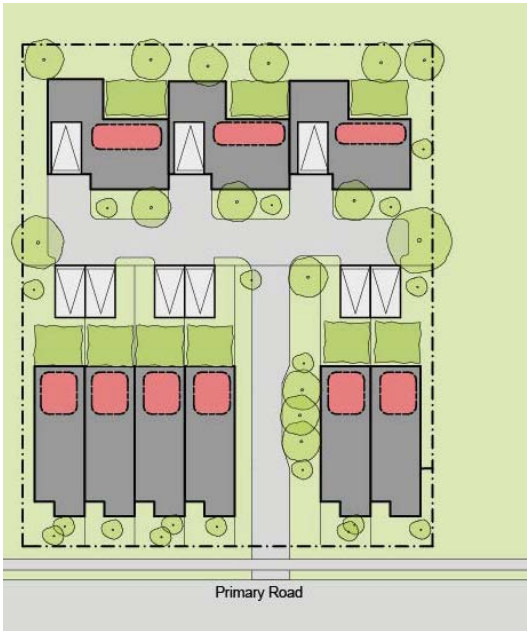
Relevance	Reason
Medium	Will not automatically fall under SEPP but is efficient for deep lots (45-50m) especially with lots over 40m wide.

Relevance to Nowra Medium Density Study

- Potentially an efficient development type in Nowra particularly in areas with large deep lots.
- Often requires amalgamation to create efficient layouts as smaller sites tend to have a large amount of vehicular circulation.
- Could provide opportunity for new mid block streets/lanes.
- May require a site specific response to test orientation, densities, retention of trees etc
- A well designed scheme could result in less dominance of garaging along the street.

Typical principal development controls	
Land title:	Torrens or strata
Minimum Lot size	1250m²
FSR:	0.45-0.7:1
Landscaped area	20 - 50% increases with lot size
Building height	8.5m (2 storey) - 10m (3 storey)
Front setback	Average of neighbourhood or 5.5m
Rear setback	3 - 6m
Side Setbacks	Front 15m: 1.2m at front Rear 15m: 2.5m plus 45° height plane
Car parking	1-2 spaces





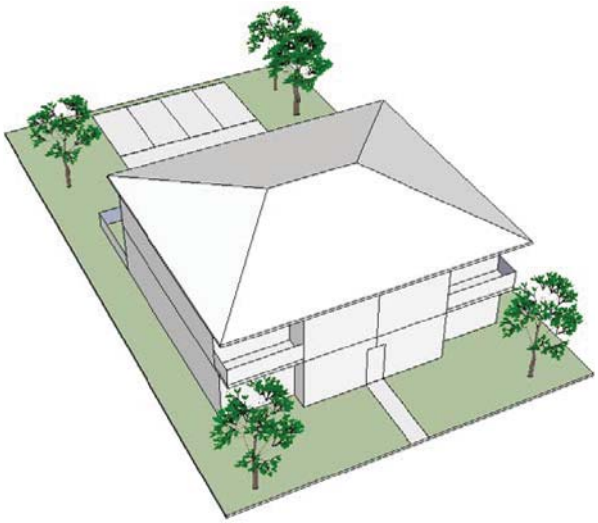
Manor House

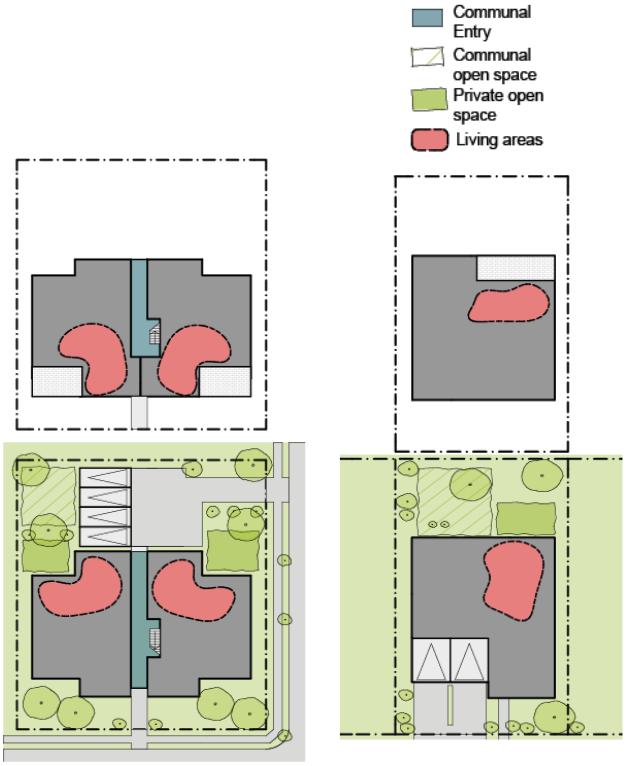
Relevance	Reason
High	Will automatically fall under SEPP in areas zoned for medium density development.

Relevance to Nowra Medium Density Study

- Could be assessed as complying development under SEPP (Exempt and Complying Development Codes) 2008 even if adjoining a heritage building.
- Recommended for land zoned low and medium density development. Some areas of low density in Nowra have a concentration of heritage buildings and new development would require careful design to fit into the streetscape.
- Depending on car parking requirement and design controls this typology could “fit” into the streetscape.
- Recommends that controls for setback, bulk, scale, FSR , building height, landscape and private open space should be kept the same as what is prescribed for a single dwelling house in the area.

Typical principal development controls	
Land title:	Torrens or strata
Minimum Lot size	600m²
FSR:	0.45 - 0.60:1
Landscaped area	20 - 50% increases with lot size
Building height	8.5m
Front setback	Average of neighbourhood or 5.5m
Rear setback	3 - 6m
Side Setbacks	Front 15m: 1.2m at front Rear 15m: 3.6m plus 45° height plane
Car parking	0.5 - 1 space per dwelling





CHAPTER 3
CASE STUDIES

Methodology

The challenge of managing increased demand for medium density development in close proximity to a CBD is not unique to Nowra. Many Councils around NSW are faced with similar issues.

The following case studies were selected for their relevance to the situation as it exists in Nowra. Emphasis was placed on developments of a similar scale to that which is likely to occur within the Study Area, the case studies that fall into this category are: Kiama, which is a neighbouring LGA of similar scale and Berry, which is within the Shoalhaven LGA.

The next category were areas that have a well defined character with a heritage component, the case studies which fit this category include Hunters Hill and Bathurst.

Two greenfield case studies were included for comparison to enable consideration of what is possible when there are no restrictions and there is no existing character to reference. The case studies for this category include Tullimbar, located within the Shellharbour LGA, and Casuarina Beach, a new beachfront development within the Tweed Shire LGA.

In order to assess the case studies a series of criteria were identified, to enable comparison and to reflect the components that were deemed most influential on the design outcome. The criteria that were selected included the following streetscape specific elements;

- setbacks (primarily front setbacks),
- the location of car parking and vehicular access requirements,
- front fences, and
- building materials and colour selection.

Case Study 1 - Short Street, Hunters Hill

The Hunter's Hill DCP (2013) aims to assist with efficient planning and assessment of development while maintaining the rich heritage characteristics within the LGA. This DCP was selected for review for the following reasons:

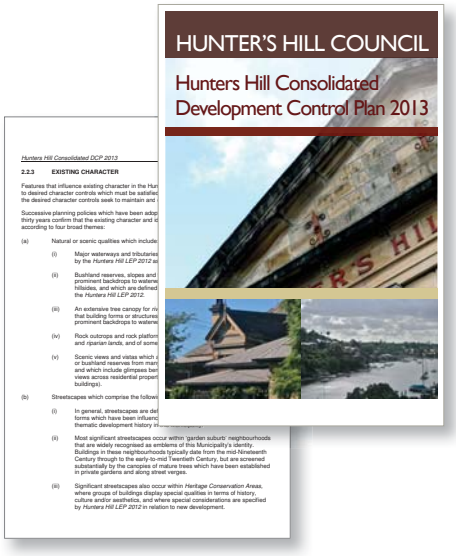
- The DCP and its objectives are clear, providing a concise document which is easy to read.
- The document uses performance based controls.
- The area has several building types and infrastructure, including heritage items.
- The centre has interesting development types, allowed for within the existing planning controls.
- The area includes a range of unique character areas.
- Streetscape is considered, including setbacks, fencing and housing frontages.
- Heritage and landscape are prominent in the area and this is reflected in the controls.

Relevant controls

The emphasis is on retention of 'garden suburb' characteristics and the maintenance of established setbacks. Buildings and especially driveways and parking are not to dominate the streetscape. There is a recognition that front elevations should be 'animated' through the use of verandahs, living room windows and front doors.

Setbacks are defined by averaging the setbacks for the adjacent developments. Parking is to be unobtrusive and preferably permeable, and is not generally to be located in the front setback. The number of parking spaces required relates to the size of the units being built and there is a requirement for designated visitor parking.

Vehicles are to enter and exit in a forward direction. Front fences to a height of 1.2 m are allowable and are to be of sympathetic materials - stone, timber, brick if suitable. Colours and materials are to be compatible with the immediate townscape and colours are to be medium to dark earthy tones.



Relevance to the Nowra medium density study

- Hunters Hill has a significant heritage character which is articulated in the DCP through an existing character statement.
- The document considers heritage and heritage impact in detail and identifies ways to ensure that the heritage value is retained.
- Controls are based on the concept of retaining reference to established development, which is particularly relevant for infill situations.
- Built form height is generally to a maximum of two storey.

Development case study: 11 Short Street, Hunters Hill

This site is within a Heritage Conservation Zone, and is in close proximity to transport and shops. The development consists of three single storey attached courtyard style houses built in 1991.

- This development is compliant with the streetscape controls - the front setbacks are landscaped, the buildings are not dominant and the front facades are 'animated' through the use of visible front doors, verandahs and habitable room windows (although not living rooms in this case).

View from Short Street (source: Google)

- Determination of existing adjacent setbacks was difficult given its corner site adjacent to a park, but the front setback does match the immediate adjacent property to the west.
- Regarding parking and driveways, this site shows a variation from the stated controls in that three separate car spaces are located in the front setback, with reverse exiting. Whilst generally not permitted, this site appears to have been given exemption.
- Front fence maintains a 1.2m classic 'picket fence' style common to the neighbourhood.
- Building height is maintained at 1 storey across all 3 lots and fits with the surrounding building heights and the 8.5m height limit.
- The courtyard house design reduces privacy issues and overlooking of private open space from the apartment building to the south.

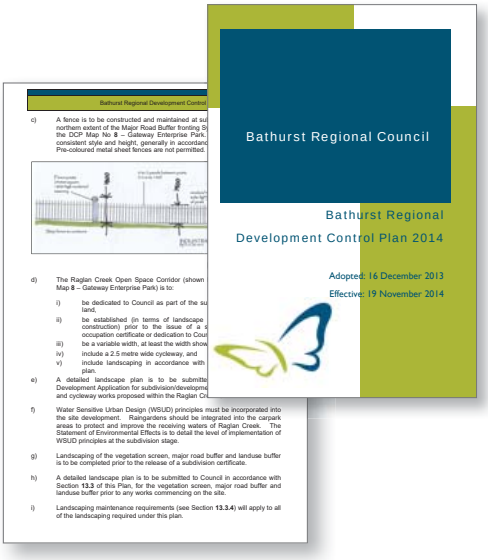
Overall this development in Hunters Hill has used design elements and clever layout to create three medium density units that are well suited to the area from a character perspective, even though the design does not meet all DCP controls.

Aerial Map, 9-11 Short Street, Hunters Hill (source: nearmap.com)

Case Study 2 - Lambert Street, Bathurst

The Bathurst DCP (2014) aims to encourage development within the Bathurst area, whilst protecting and strengthening the areas that have a strong existing character. This DCP was selected for review for the following reasons:

- The DCP clearly sets out objectives.
- The document uses a mix of numerical and performance based controls.
- Broad precincts have been identified, which controls can then reference, enabling different controls to be instated over different parts of the LGA at a broad scale.
- This LGA is diverse and the DCP is relevant for a wide range of block sizes.



Relevant controls

There are no specific streetscape controls. Setbacks are dependant on location, and if the property is within the Heritage Conservation Zone (HCZ), they are to compliment existing setbacks. For properties outside the HCZ, the front setback is set at 6m, unless there is an established existing 8m setback, which needs to be adhered to.

Parking is to be located behind the building line, or must complement surrounding setbacks. For medium density developments in Precinct 1, the parking space requirements are 1 covered space for a 1 or 2 Bed unit, with 1 visitor space per 4 dwellings or part thereof. For 3 Bed units the requirement is 1 covered car space per dwelling and 1 visitor space per 2 dwellings. Roller doors are not to be visible from the street within the HCZ.

Relevance to the Nowra medium density study

- Bathurst is a significant regional centre.
- There are well defined Heritage Conservation Zones, and the DCP acknowledges the need for sympathetic development in these areas.
- There is a diversity of typologies being developed within the LGA.
- The majority of development is single storey.
- Lot and block sizes are similar to those found in the Nowra study area.

View from Lambert Street (source: Google)

Development case study:
95-107, Lambert St, Bathurst- Analysis

The site is located within the heritage conservation area and this determines much of the streetscape aesthetic.

- Front setbacks along the street reflect that of existing development.
- Parking has exceeded the required allotment of one covered car space and one visitor space per two sites. Two enclosed garages are provided for each unit. A concession has been made to allow two of the four front sites to each present two single roller doors to the street.
- The site appears to have a mix of titles: the four lots that front the street are on Torrens Title (separate addresses and individual letterboxes) while the remaining 10 units to the rear seem to be Strata Titled.

Overall this development has sought to retain a 'heritage' feel through the proportions and style of the design, especially the roof, and through the details used for elements such as the window sills, verandahs and picket fences.

View of the central driveway (source: Google)

Aerial Map, 95-107 Lambert Street, Bathurst (source: nearmap.com)

Case Study 3 - North & Albert Street, Berry

Overview

The DCP for the Shoalhaven LGA (2014) has recently amalgamated a diverse range of controls into a single document. Chapters G13 (dual occupancy), and G14 (other residential accommodation) are included in this review to provide an understanding of the current controls under which development is occurring, with a specific focus on the study area.

Relevant controls

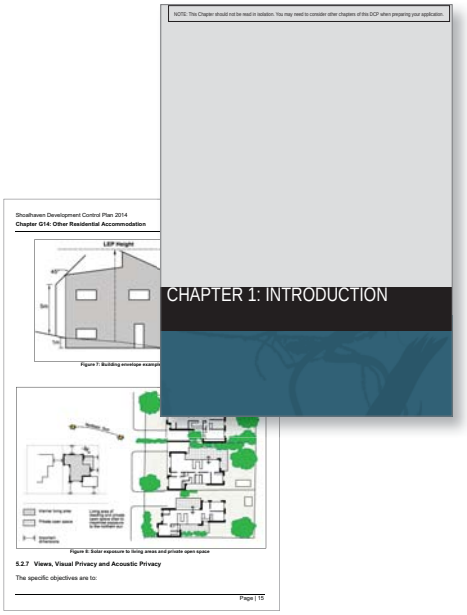
The emphasis of these DCP chapters is on the creation of a sense of address with regard to streetscape controls. New development is to make a 'positive contribution', with parking and garages not to be dominant. The front facade is to incorporate two of the following elements - front door, living room window and verandah, portico or the like.

Setbacks are to be 5-6m and 7.5m if the block is deeper than 30.5m for dual occupancy, and 5.5m for single story multi residential development.

Vehicles are to enter and exit in a forward direction, with car space requirements for dual occupancies being: 1 on-site car space for <125 m^2 GFA, and 2 spaces if development is >125 m^2 or 3+ bedrooms. For multi residential developments the ratios are: 1 space for units <55 m^2, 1.5 spaces for units between 56 and 85 m^2 and 2 spaces for units >86 m^2, inclusive of visitor spaces, with at least one space being for the sole use of each dwelling.

Front fences are to be less than 1.2m if of solid construction, and up to 1.8m if 50% transparent. Materials for the fence is to be similar to those used by attractive buildings in the locality.

For the Shoalhaven DCP three developments have been selected for further analysis.



18 Albert St, Berry - Analysis

This development has utilised several interesting and unusual elements to provide street presence. Controls have generally been met and have generated some successful outcomes.

- Architectural features such as the dormer windows generate a facade that addresses the street, whilst additional dormers address the driveway, which is the actual entry to the residence.
- The two elements addressing the street, required under the controls, are actually the living room window/ doors and a verandah.
- Private open spaces in the 5.5m front setback work together with the 1.5m hedged fence to create a functional space.
- Two of the eight sites are not able to exit parking in a forward direction and visitor parking appears to be informal.

View of street frontage addressing Albert Street

- A significant design element is that the central driveway splits around a tree at the street frontage, which reducing the visual impact of the vehicular access and asphalt/ concrete. The use of a higher front fence combined with the tree in this location limits views down the driveway.
- The high box hedged landscaping and is not generally consistent with the local area.
- The timber shingles and chalet style building form are not typical of the area, however the development is well considered and finished to a high quality.

Aerial Map, 18 Albert Street, Berry (source: nearmap.com)

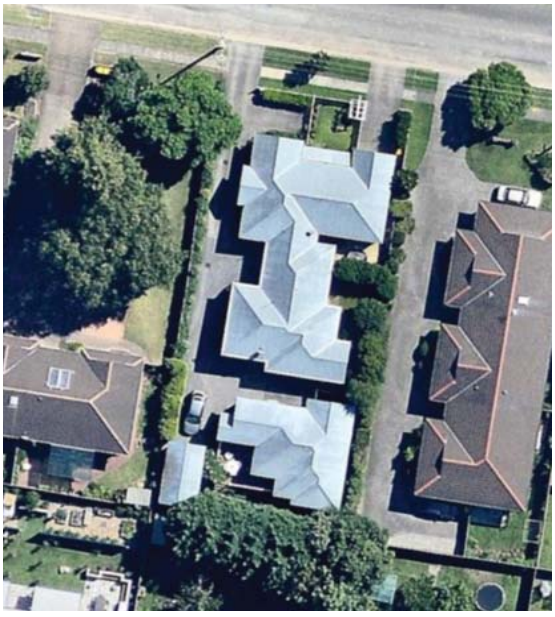
View from North Street

View of the front garage and driveway (source: Google)

130 North St, Berry

Designed and built by a local builder, the details and finishes of this development are of a high standard.

- The street is addressed by a front door, a verandah and a living room window. The glazed panels in the garage door are effective in reducing the typical visual impact of garages facing the street.
- Sight lines down the driveway terminate in a single free standing garage, which adds to the appearance of a single residential development.
- The front setback is less than the proscribed 5.5m, at 4.5m, and provision is made for visitor parking space within the setback. A second driveway serves the street facing house, yet the overall contribution of the development is such that it makes a positive contribution to the street.
- Colours are a consistent palette and materials suit the character of the neighbourhood.
- Roof form is varied and displays two gables which break up building bulk and add interest.
- The front fence is low, semi-transparent and combined with a slighlty higher hedge.



Aerial Map, 130 North Street Berry (source: nearmap.com)

View from North Street

140 North & 69 Albert St, Berry

Another recent development by a local builder:

- The development addresses the street and driveway through chamfered entry elements, along with verandahs and windows.
- Garages are located towards the centre of the development and set back, therefore hidden from view. Each unit has a single garage and a car space, which exceeds the control requirements, however has no detrimental effect on the character of the streetscape.
- Front setbacks are the required 5.5m and front fences are picketed and maintain the village feel and character of the area.
- Colours and materials vary yet maintain a consistent neutral palette.
- There is a variety of dwelling sizes, including 3 and 4 bedroom properties, under a community title arrangement.
- A key characteristic of this site is the deep block and two street frontages which allows for a through-site link for pedestrians. A tree, located in the middle of the link, terminates views and mitigates the visual impact of the vehicular driveway and hard surfaces.

Aerial Map (source: Nearmap.com)

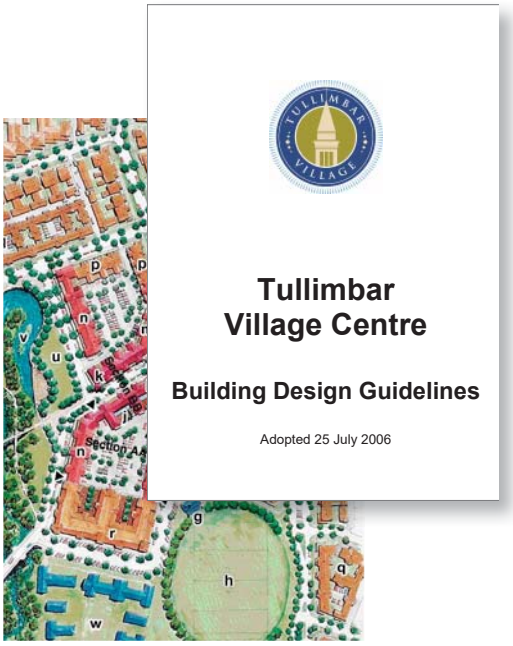
Case Study 4 - Tullimbar Village Centre, Shellharbour

Overview

The Tullimbar Village Centre Guidelines (2006) by Shellharbour City Council set out how development will proceed as this greenfield village is established.

Seeking to create a township based on diversity and vibrancy, with a focus on walkability, attention has been paid to how controls can support these aspirations. These design guidelines were selected for review for the following reasons:

- This development is being built based on 'New Urbanist' principles of walk-ability and community.
- Specific attention has been placed on controls for medium density developments.
- Setback controls are driven by a focus on building use.
- The built form outcome displays a desirable balance of both diversity and cohesion.



Relevant controls

Controls that apply to the village centre seek to create an 'urban core feel' with a sense of enclosure along the new streets. Setback requirements have been developed to ensure good solar access, with a front setback of up to 4m, and an allowance for features such as a verandah or entry portico able to project forward of the building line.

Each development block was required to comply with the Building and Access Guidelines, that specifically set out how the buildings are to be located on the properties and how vehicular access would be achieved. Generally garages were to be unobtrusive, with minimal driveway crossings. The use of rear lanes for access was encouraged.

The landscaping of front setbacks was not to create a barrier between the street and the residence, with a maximum fence height of 1m. Higher fences would be considered for approval dependant on them being 75% transparent.

Relevance to the Nowra medium density study

- Due to the greenfield site, these controls are an example of what can be possible when the need to match existing development is not an issue.
- These controls have focused on the creation of a specific 'feel' for this development, based on the desire for an urban core.
- Variety and innovation have been achieved within clearly defined controls.

View of the street frontage addressing Broughton Avenue

Aerial Map (source: Nearmap.com)

Broughton Avenue, Tullimbar Village Centre

Covered by site specific building design guidelines, Tullimbar takes a different approach on several issues:

- The streetscape is characterised by houses that address the street with awnings and verandahs.
- Low level front setback landscaping creates a focus on the architectural design of buildings.
- On street parking is integrated into the street design, and on-site parking is generally to the rear of buildings.
- Picket fences and hedges are on the front boundary and clearly frame the public space which includes a wide verge and carefully selected street trees. Front fences can be built elements (picket fences etc) or landscaped elements (hedges) or a combination of both. Front fences are limited to 1m in height.
- Building height influences the character of the neighbourhood. A **minimum** height of two storeys applies, with exceptions for schools and civic buildings which can be one storey.

Case Study 5 - Manning Street, Kiama

Overview

The Kiama DCP (2012) aims to assist with efficient planning and assessment of development proposals, whilst maintaining the desired character of this area. Located on the south coast of NSW it is a neighbouring LGA to Shoalhaven.

This DCP was selected for review for the following reasons:

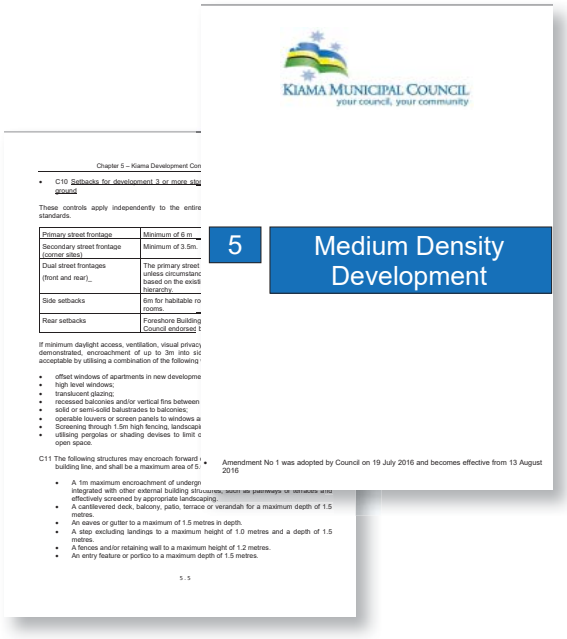
- Developed in response to similar issues to those facing Shoalhaven City Council.
- Controls cover a wide variety of block sizes, building typologies and development scenarios.
- Interesting developments have resulted from these controls.

Relevant controls

Controls focus on the creation of an 'active' streetscape. Habitable rooms are required to provide clear views over the street and entries etc. Architectural features, such as entry porticos and verandahs, are encouraged on the front elevation.

The front setback is to be 4.5m for buildings up to 8.5m high. For buildings between 8.5m and 11m, this is increased to 6m, with an allowance for encroachments of up to 1.5m for elements such as entry features and porticos.

Access points for parking are not to dominate the facade, and materials and colour palettes are to be used to minimise the visibility of driveways. Front fences are limited to a height of 1m, and the length of solid walls along a facade is also limited.



Relevance to the Nowra medium density study

- Kiama is a neighbouring council, with a similar climate and local characteristics.
- Controls have been developed to address similar issues to those facing Shoalhaven Council.
- Developments occurring in Kiama are of a similar scale to those being proposed in the Nowra area.
- The majority of the medium density development occurring in Kiama is happening within areas of established low density residential character.

View of the street frontage addressing Manning Street

101 Manning Street, Kiama

This is a small scale, medium density development of four dwellings.

- The street facade displays a mix of materials which effectively breaks up bulk and scale. Vertical blade walls create a strong rhythm along the street.
- Parking is accessed via a driveway to the north-east of the site utilising the topography (lowest part of the site) to provide undercover parking, which is semi recessed.
- The front setback of this development is particularly successful, with a layering of stone wall and vegetation providing an attractive streetscape whilst also catering for private outdoor space for residents.
- Front doors are clearly visible from the street and individual pedestrian paths lead to each door.

Aerial Map (source: Nearmap.com)

Case Study 6 - Casuarina Beach, Tweed Shire

Overview

Casuarina Beach is a master planned community with a focus on environmental planning and management and urban and landscape design, combined with an understanding of the significance of its coastal site.

Created initially via an agreement with Council in the late 1990's, the controls that apply to the Casuarina Beach development area fall into two categories, those that form part of the general Tweed Shire Council DCP (2008), and those created under the Specific Sites section which relate exclusively to this site.

This DCP was selected for review for the following reasons:

- The Tweed Shire Council general section very clearly sets out, via the extensive use of diagrams, what is permissible and desirable development.
- Tweed Shire Council recognises, and has controls specifically relating to, medium density typologies such as townhouses and rowhouses.
- Casuarina Beach has had to implement controls to create the desired character as there was no existing character to create a blueprint for on-going development.

Significant controls

The controls assessed are a combination of those required by Tweed Council, with those specifically required for development within the Casuarina Beach development.

Tweed Council has specifically identified terraces, townhouses and rowhouses as a development typology, with specific controls applied. Generally, streetscape controls require consideration of the existing character, which was not possible at Casuarina, so a desired character was identified.

Front setbacks are to be 6m, with special elements being allowed to encroach up to 3m into this space. The front facade is to be well designed, with prominent front doors and the provision of habitable rooms with adjacent open space at ground level.

Parking is to be to the rear wherever possible and entry and exit is to be in a forward direction. Front fences can be up to 1.5m high, with a solid element to a height of 600mm and a 60% transparent zone above.

Relevance to the Nowra medium density study

- The recognition of the townhouse and rowhouse typology is an innovative direction for a regional council.
- Casuarina Beach is a greenfield development, but it has recognised the role that medium density development can play as a transition between the scale of moderate high rise unit development and the more dominant single storey detached residential development.
- Tweed Council has specifically zoned for rowhouses to transition between the commercial core zones and low density residential zones.

View of the street frontage addressing Canthium Way

1-8 Canthium Way, Casuarina Beach

A greenfield masterplanned site, Casuarina Beach, has developed a consistent streetscape with some innovative approaches.

- Requirement of one habitable room at ground level adjacent to an external private open space. This creates a streetscape with an element of connection to the community.
- Generally front doors should be prominent but in this case entry gates have been utilised.
- Front setbacks comply with the 6.0m requirement with verandahs and other elements possible to 4.0m. The upper storey facade is articulated along with the roof line and blade walls. This creates variety in the streetscape facade.
- Tweed Council requires that front setbacks are landscaped and designed to give consideration to the existing area.
- Consistent landscaping along the street, due to the masterplanned nature of the site, adds to coherency throughout the neighbourhood.
- Car parking is accessed via a rear lane, which minimises driveways. The lanes allow space for for visitor parking.

Aerial Map (source: Nearmap.com)

- Front fences are up to 1.5m high and provide sufficient privacy to private outdoor spaces.
- The second storey is required to be recessed and, in this case study, well modulated.
- The use of materials and the articulation of the form further enhances the human scale of this development.

CHAPTER 4
CONSULTATION

Identifying the issues

The character of the study area has been identified by the local community as one that is worth saving, however given the existing planning controls and the expected pressure for more development in the future there is a real and perceived risk that the character of these areas will be altered over time with future development.

The majority of the study area is not located within a heritage conservation zone and the concerns of development changing the character needs to be balanced with the desire not to preclude all development in such a well located area.

The overarching aim is to support appropriate, well designed, well integrated development that enhances and supports the character of these areas, whilst also recognising the need for diversity of building typologies and the benefits that can be gained by the creation of medium density dwellings, from both an affordability and liveability perspective.

Workshop 1: Council

In order to clarify the "local character" of the study area Studio GL ran a workshop with Council staff in December 2016. The workshop included a presentation on the existing character and then participants were involved in group visioning exercise to identify the existing character of the study area and indicate what they would like it to look like in the future.

Participants were provided with a collection of words, phrases and images to help them discuss options and identify what was important. This was followed by a presentation on case studies from other areas and a facilitated discussion on opportunities and challenges.

EDITORIAL - Nowra's grand old streets are worth saving

30 Aug 2016, 11:37 a.m.

All too often, Nowra gets a bad press. Its CBD is dull, it's poorly maintained, its town planning is a disaster – or so the critics say. However, take a walk around its old precinct between Berry Street and the showground and all those negative assessments quickly fall away.

This part of town is home to some lovely streets and grand old homes that eclipse those in many of our neighbouring towns, Berry included.

For visitors passing down the highway, there is no inkling of the beauty secreted behind the ugly facades, car yards and concrete overpass. Even for residents, it's all too easy to overlook the charms of old Nowra.

For those who live in the old part of town, it's a different story. They know exactly how special their little patch of ground is – how the town's history is ingrained in the high ceilinged weatherboard homes that line the streets. Naturally, they want to preserve their neighbourhood.

Pressure is mounting on the old neighbourhood with many of its blocks zoned for medium density development. That means apartment blocks.

Nowra is facing some tough choices. To prosper it needs to grow. That means more housing. However, hemmed in by flood plains and forests, land is scarce. The argument goes that building out is problematic so building up is an increasingly attractive option. But the question must be asked: is destroying the old to make way for the new the right way to go? Will we regret choices we make now in years to come, just as we have with the destruction of beautiful CBD hotels to make way for unlovely modern buildings? Should there be a more considered approach to balancing the needs of growth with the desire to retain history and character?

The future of old Nowra has become a council election issue, with the Greens calling for a rezoning that would preserve the old precinct. They argue that the old part of town could easily translate into tourist dollars.

Nowra is an undersold destination. Very few people who visit the Shoalhaven's beaches are aware of the hinterland drawcards – apart from the ice cream stops in Berry and Kangaroo Valley.

We rightly focus on making more of the river but we should not lose sight of our other assets, including old Nowra. It would be a crying shame if we lost it forever, replacing it with characterless unit blocks.

Comments

Anon • 19 hours ago

The problem starts when we start trying to declare boring run of the mill fibro shacks as heritage items, instead of the classic 1880's-1920's built homes. Fight for the things worth fighting for and request council to amend the Local building controls to require any new home or building be built in the federation style of home. We have some fantastic builders like Strongbuilt who do amazing styled homes that look direct from that era but hold modern requirements internally

South Coast Register

Proudly serving the local community for more than 130 years

WE ♥ OLD HOMES AND WE VOTE

Heritage plea

TOP TOTS BECOME HEROES

SIGN-UP TIME FOR THE SHOW

Guess who can get you 2 pairs NO GAP*!

2 pairs of single vision glasses from $199

Junction Street Nowra • Ph: 4422 4808

Existing Character

LANDSCAPED

WIDE STREETS

HEDGES

PITCHED ROOF

TIMBER

STREET TREES

WEATHERBOARD

HERITAGE

GRAND OLD HOMES

ELEGANT

PICKET FENCES

FRONT PORCH

VICTORIAN STYLE

FEDERERATION STYLE

Desired Future Character - What Council Staff Would Like To See

HOUSING OPTIONS

RE-USE

FRONT DOORS

PARKING

ACTIVATION

DIVERSE

APARTMENTS

AFFORDABLE

MEDIUM DENSITY

TERRACES

Desired Future Character - What Council Staff Think The Community Would Like To See

SHALLOW SETBACKS

PEDESTRIAN FRIENDLY

WELL KEPT

MAINTAINED

DIVERSE

STREETSCAPE

LOVELY STREETS

VERANDAH

ENTRY

INTERACTIVE

AMBIENCE

YOUTH FRIENDLY

Workshop 2: Community

04 CONSULTATION

A 2.5 hour workshop with local residents, and members of the community was held on 18 May 2017. The purpose of the workshop was to understand in more detail the key issues for the local community and to help to identify opportunities and challenges for the study area.

The workshop was facilitated by Diana Griffiths, Felicity Lewis and Robert Ellis from Studio GL and involved over 20 participants who generously contributed their time and shared their knowledge and views about the site's character and their aspirations for the area.

The following activities were undertaken during the workshop:

- An introduction by Studio GL to the project including objectives and program, showing the study area in context and presenting mapping of existing planning controls.
- Group discussion: workshop participants were divided into five groups and using a placecheck map, aerial photos, study area photos, and 'visioning' text.
- As a conclusion, a representative from each group presented their findings of their vision for the study area, including the desired future character and emerging ideas to the wider group.
- A further presentation by Studio GL included the NSW Medium Density Design Guide, and key challenges and opportunities for central Nowra.
- Finally participants were asked to summarise key visions/opportunities/challenges for the area on post it notes, these were then displayed to facilitate group discussion.

Existing Character - What The Community Think Is Important

AMBIANCE

VICTORIAN STYLE

FEATURE FRONT DOORS

HEDGES

PARKING

WELL KEPT

VERANDAH

LOVELY STREETS

HERITAGE

AFFORDABLE

AFFORDABLE

MODERN BEHIND

MODERN- WITH CHARACTER APPEAL

LARGE SETBACKS

PEDESTRIAN FRIENDLY

STREET TREES

PITCHED ROOFS- GABLES

CHARMING

FEDERATION STYLE- TO BE PRESERVED

GRAND OLD HOMES

PICKET FENCES

FIBRO

YOUTH-FRIENDLY

WEATHERBOARD

Existing/ Future Character - What The Community Dislike

ZERO SETBACK

URBAN FEEL

NEEDS GARDEN

BUILDING MATERIALS (NOT IN KEEPING)

THREE STOREY

NOT IN KEEPING WITH THE AREA

APARTMENT BLOCK

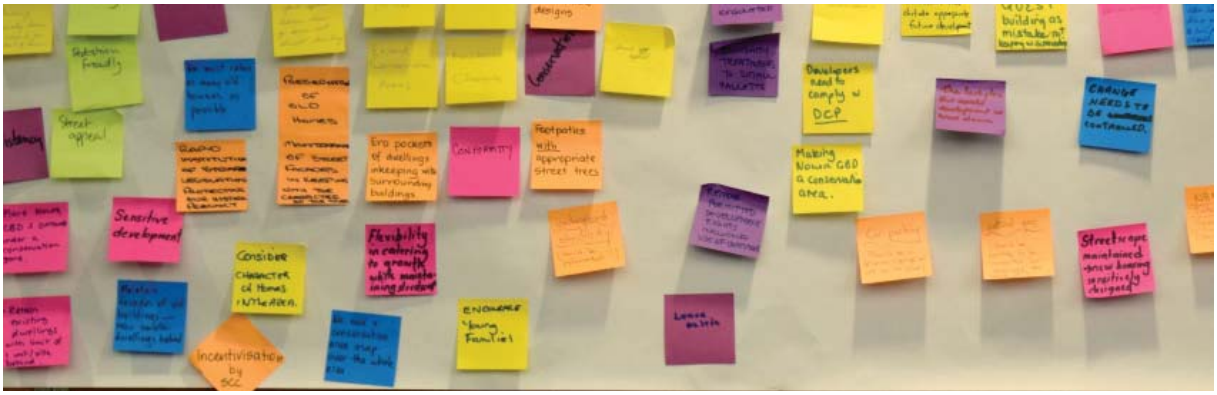
FOUR STOREY

OUT OF CHARACTER

Community visions/ opportunities/ ideas

Key individual visions, opportunities and ideas, presented on post it notes, are summarised below from most noted to least:

1	Retain existing old houses
2	Maintain existing buildings/ retain façades, and incorporate sensitive development behind.
3	Expand conservation area (possibly for whole study area).
4	Preserve the existing streetscape
5	No new car parking in the street
6	Consistency (of character & new development)
7	No development in the area



Community opportunities and challenges

The key opportunities and challenges for central Nowra identified by the five workshop groups are captured below:

1	Early 20th/ late 19th Century historic houses within the study area are highly valued.
2	The character of the area is important for Nowra.
3	Consistency of character is important for future development.
4	'Fibro' homes have influenced the character of the area.
5	'Fibro' homes appearance can be improved and made more consistent with more historic buildings by weatherboard cladding.
6	Opportunities for sympathetic development through facade retention and modern development in rear of properties.
7	Recent developments are out of character with the area.
8	'Modern' developments considered not appropriate by some participants.
9	Principle of some new development and change to the area not supported by some participants.
10	The importance of attracting young people to the town noted by some participants.
11	Concerns were raised about the quality of the re-development of housing commission owned homes.

Workshop 3: Developers & Agents

About the workshop

A 1.5 hour workshop with developers, consultants, and agents working on local developments was held on 22 June 2017. The purpose of the workshop was to gain knowledge and insight into the local development market, and identify barriers and constraints to development within existing planning policy.

The workshop was facilitated by Felicity Lewis and Robert Ellis from Studio GL and involved 7 participants who were encouraged to share their knowledge and experience of residential developments in Nowra.

The workshop took the format of a presentation by Studio GL, including an introduction to the project, and presenting mapping of existing planning controls.

A discussion was then held around participants experience of the current development market in Nowra. Studio GL then presented information on potential future planning policy for medium density development in New South Wales, and a summary of community views from Workshop 2.

A discussion was then facilitated around possible future changes to planning controls.

The Residential Development Market in Nowra

Key points raised in the discussion of the existing development market in Nowra are highlighted below:

- Duplex developments are currently popular, with smaller rear gardens due to maintenance and upkeep.
- 3 bedroom single level units with a double garage between 130-170sqm have been a standard new build development type in Nowra.
- Smaller sized units are becoming more popular with younger couples.
- The yield for developers is generally less on a 2 bed than a 3 bedroom property
- Larger sites have been coming to the market recently, but are still being generally developed for 3 bedroom houses.
- A number of 4 storey larger scale 50-100 unit apartment developments are being proposed on the edge of the CBD (outside the study area).
- The development market in Nowra has picked up in recent years due to increased investment and improved transport links.
- It is envisaged that there will be more single person households wanting to live near the CBD in the future.

Future residential development in Nowra

Discussion around possible changes to existing planning controls focused on the following themes:

FSR (floor space ratio)

- Some participants considered that the existing 0.35 FSR restricts development in Nowra, and is not consistent with the 0.5 FSR permissible for dual occupancy developments.
- The combination of 0.35 FSR and 35% landscaping requirements was noted as being often unachievable. A variation was often sort to reduce the landscaping requirement to 30%.

Landscaping

- Concerns were raised about increasing the required area of landscaping due to larger gardens not being viewed as important or desirable by purchasers.
- Retaining areas of deep-soil landscaping to maintain existing mature trees and provide planting areas for new trees was discussed and viewed more positively.
- The quality of landscaping was noted as generally poor in new developments in Nowra. Some participants viewed the quality of landscaping as more important than the quantity.

Outdoor Space

- There was a general consensus that the requirements for outdoor space were inflexible.
- It was suggested that the provision of outdoor space could be averaged across a development, and that this could enable the provision of 1 bedroom units without gardens.
- It was suggested that possible reasons for the lack of 1 bedroom units being developed in Nowra could be due to parking and outdoor space requirements.

Minimum Lot Size

- Some participants note that the existing 350sqm minimum lot size can be an issue and that variations are regularly sort from Council.
- It was noted that there is still a preference for Torrens Title dwellings, but that community titling also works well if communal space is kept to a minimum.
- Cubic Strata was raised as an alternative titling system which is being more widely used and incorporates ownership of a units external walls.
- It was noted that 300-350sqm was considered a good lot size for a 2 bedroom house.

Parking

- Parking was seen as a key constraint to development.
- It was generally agreed that stack parking for individual units should be permissible, as should the ability for individual units to reverse in to the road reserve.
- The requirement to locate parking behind the building line was seen as an issue as it requires additional length of driveway and reduces the development footprint.
- Some participants believed the council should be working towards improving public transport and reducing minimum car parking requirements within Nowra

Setbacks

- It was noted that private open space is often provided within the front setback in new developments due to space constraints, and/or block orientation.
- Wollongong Council's setback controls were highlighted as a good example. it set a minimum front setback distance of 5m or the same as adjacent buildings, whichever is less.

Materials

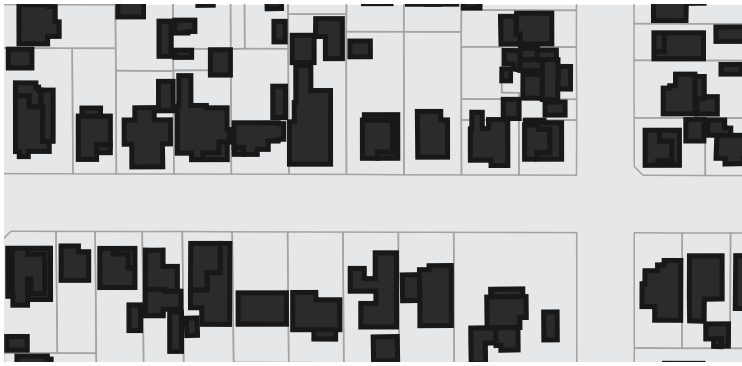
- It was noted that timber and other lightweight cladding systems (not brick or render) may have increased capital and maintenance costs.
- It was noted that detailing of materials is key to achieve a high quality outcome, and that well detailed materials which relate well to the context can increase sales values.

Retention of existing dwellings

- Retention of existing houses on a site has been generally considered by developers in their development appraisals, however, the cost of renovation and the restrictions on the remaining developable area often meant that this was not viable.
- There was a generally positive response to the suggestion that development to the rear of existing houses could be incentivised through an FSR bonus or relaxation of other controls if the existing house was retained.

Streetscape controls

- Having living room windows and doors facing the street and/ or driveway was highlighted as an important feature for future purchasers, and generally incorporated within current development design.



Summary

- It was generally agreed that planning controls should change to encourage high quality medium density that better relates to the study area's character.
- Some participants suggested that controls should generally be reduced, and trust put in the development industry.
- The idea of relaxing strict numerical controls, and providing stricter 'design based' controls was generally welcomed, however it was acknowledged that performance based controls are subjective.

Workshop 4: Council

About the workshop

A 2.5 hour workshop with council staff was held on 8 December 2017. The purpose of the workshop was to test initial development controls proposed in the draft recommendations report.

The workshop was facilitated by Diana Griffiths and Robert Ellis from Studio GL and included presentations on the recommended LEP and DCP controls. Group discussions and annotated maps encouraged participants to provide feedback on the recommendations based on council's experience of administering the current development controls and assessing development applications.

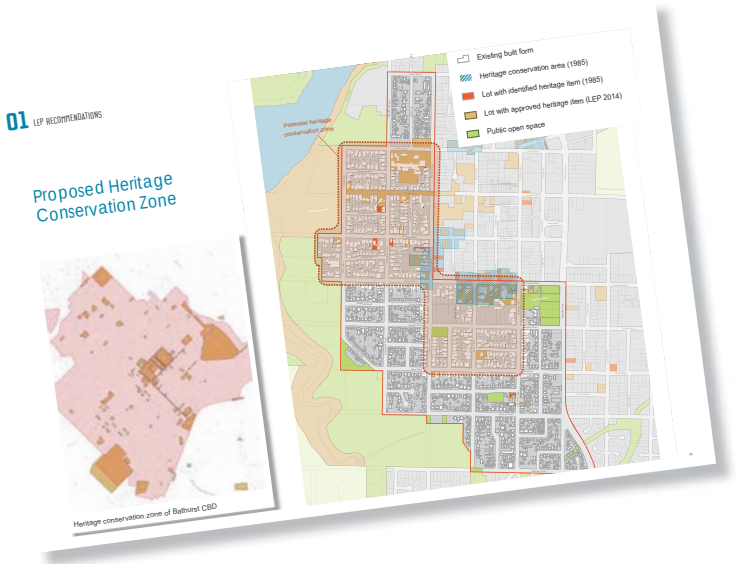
Participants were also encouraged to gain an appreciation of the diversity in the study area. Cadastre maps of specific zones within the study area were provided and participants asked to identify the smallest, largest, narrowest and deepest lots, as well as consistent and inconsistent setbacks.

LEP Controls

Comments by Council staff on the proposed changes to LEP controls, outlined in the draft recommendations report, are noted below.

Heritage and Conservation

- Most participants responded favourably to increasing the areas covered by a heritage conservation zone.
- The boundaries of the potential heritage conservation zone were discussed, specifically whether Jervis Street was significant and should be incorporated in the area and if the boundary of the zone should be located along the road or rear boundary of properties.
- Some participants felt that the boundaries to the conservation area could align with streets (as properties opposite would have to respond to the area due to the provisions in the LEP allowing council to request a heritage management document for land within the vicinity of heritage conservation areas.
- Heritage items noted as identified under the 1985 LEP should be clarified as they were identified under a later revision to the 1985 LEP.

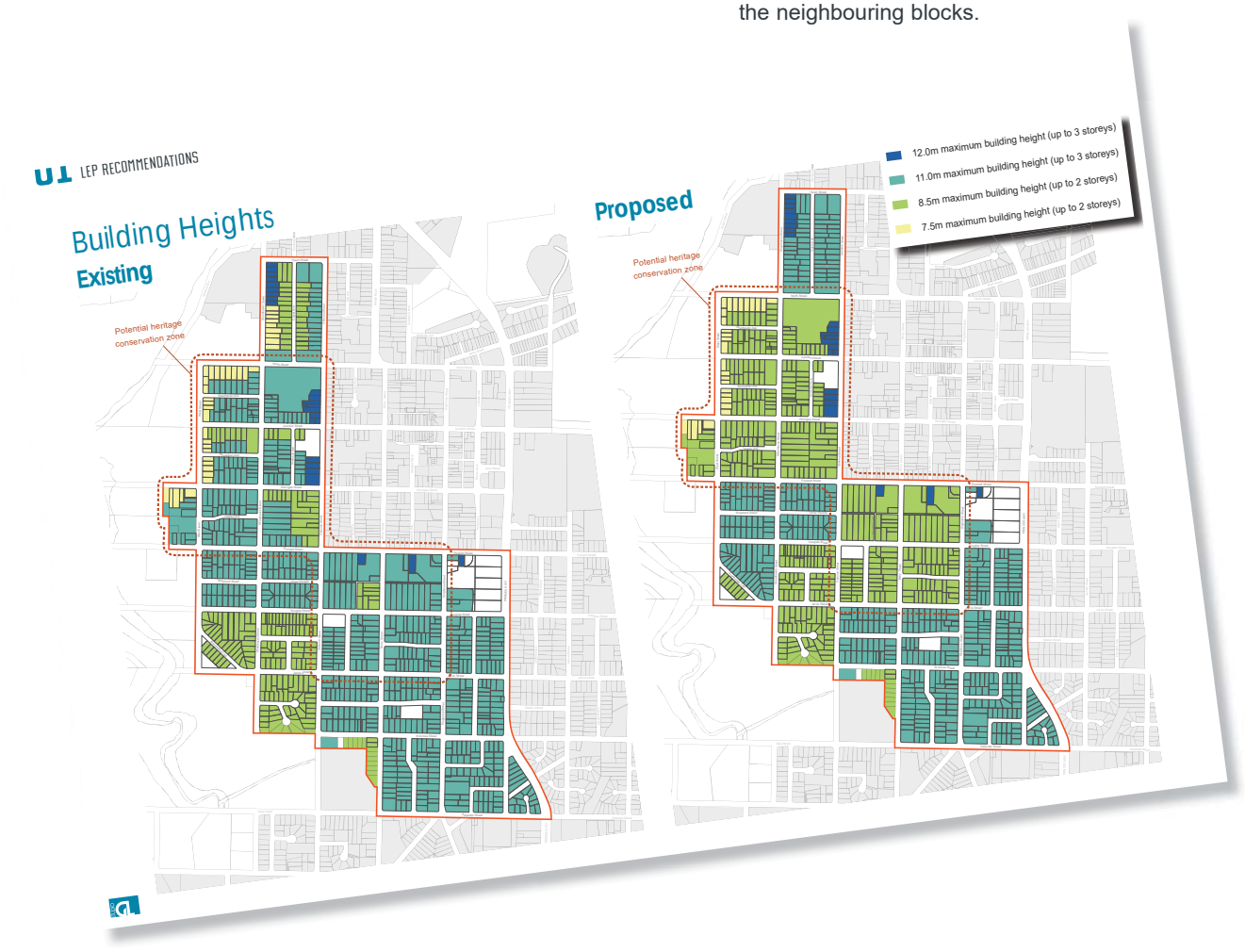


Land Use Zoning

- Expanding the area of R2 low density zoning to the west and south of the CBD was not generally supported. There were concerns about reducing potential development adjacent to the CBD, and whether a down zoning would help to retain the character of the area.
- Retaining the areas of R3 medium density to the west of the CBD was generally supported.
- Changing the zoning of the triangular area of land bound by Bainbridge Crescent, Shoalhaven Street and Douglas Street from R2 to R1 was generally supported. Some participants felt that R1 was more appropriate than R3 for this area.
- There was concern about changing the zoning of the block to the west of the Princess Highway from R1 to R3 due to the requirement for increased access from the highway. Some participants suggested that rear lane access should be required if up-zoning to R3 and that this could be achieved through LRA or DCP provisions.
- Changing the zoning of the block north of North St, south of Hyam Street, and west of the hospital from R2 to R1 was generally supported. However it was noted that this area has a specific existing character based on wide setbacks and the age of the properties.
- It was also queried whether the areas bound by Shoalhaven, Huxley, and Osborne Streets could be up-zoned to R1.

Heights

- Reducing the maximum building height to the west and to the south of the CBD to 8.5m was generally supported.
- Increasing the maximum building height along sections of Shoalhaven Street and Colyer Avenue to 11m was generally supported.
- Increasing the height of the triangular area of land bound by Bainbridge Crescent, Shoalhaven Street and Douglas Street to 11m was generally supported.
- It was suggested that if the height of the area bound by Shoalhaven, Huxley, and Osborne Streets be increased to 11m if the area is up-zoned to R1. This would make it consistent with other R1 zoned areas outside of the potential heritage conservation zone.
- It was noted that the existing 7.5m maximum building height along West Street and sections of North and Worrigee Street was a result of a strict application of Council's area wide requirement that the first row of lots adjacent to the foreshore have a lower height to encourage view sharing towards the water. It was discussed that in this location it was not appropriate. It was recommended that the height was increased to 8.5m to align with the proposed heights to the neighbouring blocks.



DCP Controls

Comments by Council staff on the proposed changes to DCP controls, outlined in the draft recommendations report, are noted below. It was generally noted that applying a heritage conservation area will ensure that DCP controls apply within this area, and that area specific controls would prevail over more general DCP controls. Additionally it was commented that Council is currently receiving a large number of variations to DCP requirements in development applications.

Street Setbacks

- It was noted that the wording within chapter G12 of the DCP (dwelling houses) considers setbacks along the street.
- Requiring separate setback controls within the heritage conservation area (HCA) was suggested. This would enable setback controls outside the HCA to be based on the future desired character of the area, and setback controls within the HCA to respond to the existing character.
- A concern was raised that the proposed 3m setback to the 3rd storey (from the building line) was not consistent with the existing 9m and 2nd storey setback requirement. Further it was queried whether more prominent upper storey would be compatible with the desired future character.
- Creating a setback to the second storey within the HCA was considered more appropriate by some participants.
- Council staff also highlighted issues with the current process where applicants can nominate which street is secondary on corner sites. This can lead to undesirable outcomes such as higher fences and no front doors facing the main street.

Side Setbacks

- Concerns were raised about consistency between the proposed side setbacks of 1.2m and the 0.9m setback permissible under compliant development (outside of the HCA).
- The proposed minimum setback to living room windows was queried, as the requirement for open space adjacent to a living room could create adequate separation.
- It was commented that the existing requirement for 1.5m to a habitable room is often varied.
- It was also noted that less variation in side setback requirements between DCP chapters was desirable.

Rear Setbacks

- The group questioned how the rear setback on corner sites should be defined.

Landscaped Area

- Council staff commented that the 35% requirement for landscaping was often being varied.
- A number of participants agreed that minimum dimensions for landscaped areas should be incorporated within the LEP definition.
- It was noted that modelling is currently being undertaken for the potential introduction of the NSW medium density code.

Private Open Space

- Concerns were raised that allowing open space to be proportional to the dwelling size could be open to abuse by applicants providing dwellings just beneath the threshold sizes. Studio GL highlighted that the proposals were based on the number of bedrooms provided (not an overall dwelling size) and were similar to provisions within the Apartment Design Guide for balcony space.
- Council staff noted that minimum dimensions for private open space were important to ensure usability.
- Participants identified that a large percentage of current development applications provide private open space in the front setback. This was identified as being problematic as privacy screens were erected, increasing the height of front fences and negatively affecting the character of the street.

Streetscape interface

- Specific corner lot controls were suggested by participants to ensure developments address both streets.
- It was noted that the current specific DCP controls relating to height for dual occupancy, and other residential accommodation, should be replaced, not deleted, as the general DCP clauses would still apply if there was no specific clause to replace them.
- The requirement for front fences to be 50% transparent was highlighted by participants as currently difficult to achieve.
- Concerns were raised about how far the proposed controls for front fences varied from the requirements for exempt and complying development, and whether this could create odd contrasts in appearance within the study area.
- Studio GL noted that 14m may be a more suitable minimum lot width for a double garage, than the previously proposed 18m.

Access and Parking

- Some participants noted that council was moving towards approving more stack parking arrangements, however others commented that Council was still generally resistant to stack parking.
- Participants commented that council is moving towards requiring 7.2-7.5m in front of garages to ensure the whole vehicle is on the site, including an allowance for unloading to the rear of the vehicle and opening of garage doors.
- There was concern from some participants about the loss of street parking resulting from allowing multiple driveway crossovers. Studio GL commented that there is the opportunity to incorporate 90° and/or 45° parking within wider streets to help mitigate this loss. It was sugesested that possibly the lower rate should only apply to these wider streets and these wider streets should be identified.
- Participants highlighted that reduced minimum parking rates were applicable near the CBD as described within chapter G21 of the DCP.
- It was noted that the provision of visitor parking should be clarified. The wording of Wollongong's visitor parking requirements was seen as a good example, based on a ratio of visitor spaces to units. Additionally the suitability of providing visitor spaces within the front setback was questioned.
- It was highlighted that leaving the site in a backward direction is currently allowed in the creation of new subdivisions (chapter 11 Shoalhaven DCP). More generally leaving the site in a backward direction was often currently allowed as a variation to the DCP controls.

Workshop 5: Community & Stakeholders

About the workshop

A two hour community workshop was held on 26 April 2018. The purpose of the workshop was to introduce the community to the two documents, currently on Public Exhibition, relating to medium density development in the designated study area, and to provide a forum for any questions that the community had.

The workshop was facilitated by Diana Griffiths and Felicity Lewis from Studio GL, and involved 15 attendees, as well as three Council Staff.

The following activities were undertaken during the workshop:

- Initially there was a presentation by Studio GL, providing a brief introduction to the project, and outlining the recommended changes to the Local Environmental Plan (LEP) controls.
- An introduction to the NSW State Government's Low-rise Medium Density Housing Code was then provided. Followed by a brief question and answer session.
- Group discussion: workshop participants, in groups of 5-6 (3 groups), were provided with the proposed LEP changes set out on maps alongside the existing condition, and asked to consider the suitability of these changes.
- A facilitated discussion enabled each group to present the conclusion and/or outcomes they had reached.
- A second presentation was then given by Diana Griffiths, which explained the recommended changes to the Development Control Plan (DCP) controls.
- Group discussion: focused on identifying which of the recommended DCP changes were considered most important, and which ones would have the most impact.
- Finally, a facilitated discussion sought to identify the changes considered of most importance.

Discussion

The first group discussion identified some changes that were not considered acceptable, relating to changes in land zoning. There was support for extending the proposed Heritage Conservation Area (HCA), especially to an area in the south west of the study area. Support was also given to the recommendation to reduce the allowable height in the HCA.

Most of the questions arose around the issue of the new State Government Complying Development Certificate pathway, that can now be utilised for low rise medium density developments.

The group discussion around the DCP changes identified the following as being of particular importance: street setbacks, side setbacks, addressing the street, fences, architectural opportunities, landscaped areas, particularly in front setbacks, and access and parking.

Concerns were raised that the recommended control over strong colours would prevent self-expression and individualisation of homes, but it was agreed that paint was acceptable as it can be changed over time. It was agreed that a restriction on cream bricks would be of benefit.

CHAPTER 5
SCENARIO TESTING

Controls testing 'by design'

The scenarios on the following pages illustrate testing of development options on a variety of lot shapes and sizes that can be found in the Nowra CBD study area. Two scenarios have been developed for each site, the first one taking a 'business as usual approach', the second one outlining a design that achieves better urban design outcomes.

The purpose of this testing was to identify what controls were driving the outcomes and the impact and benefits of changing the controls. The four typologies tested were as follows:

- Scenario 1 is a dual occupancy (attached) standard site fronting Oliver Parade
- Scenario 2 is row housing on a single standard site along Junction Street
- Scenario 3 tests row housing on a typical corner site at the intersection of Plunkett Street and Shoalhaven Street
- Scenario 4 is row housing on a deep and narrow lot along Shoalhaven Street

The investigation focused on the medium density housing typology of row housing (3 out of 4 test scenarios). Row housing, also known as villa development, is the most typical type of new development in the study area and appears to be popular with local builders.

This typology presents a number of benefits as it is relatively simple construction making it more affordable to build and it generates single storey dwellings that are generally low scale (ie one storey) towards the street and can blend into the streetscape.

The challenges for this typology are that development tends to side onto the block with long driveways creating privacy issues between dwellings on site and with neighbours. On narrow sites there is also limited landscaped area and little opportunity for deep soil planting and substantial vegetation (e.g. larger trees) and a lack of permeable areas creating increased stormwater runoff.

When medium density typologies are allowed in established lower density neighbourhoods and there is an expectation that there will continue to be a diverse mix of typologies (as is the case for the study area) it is recommended that the development controls have to become more sophisticated (and complex). There are three main reasons for this:

1. Different typologies can create a different streetscape or neighbourhood character. Development controls need to "tie" the different typologies together so new development is compatible with the local character of the area. The impact of these controls is mainly visible from the street.

2. Medium density typologies typically involve a more intensive use of the site and this can impact the amenity of adjoining (lower scale) neighbours as well as within the development. The key issues are typically the impact of the medium density development on privacy and on access to light and sunshine.

3. The third consideration is environmental as higher density may result in higher proportion of built area resulting in less permeable soil, less vegetation and fewer large trees unless the planning controls specifically address this.

Scenario 1 - Dual occupancy (attached)

Typical design compliant with current controls

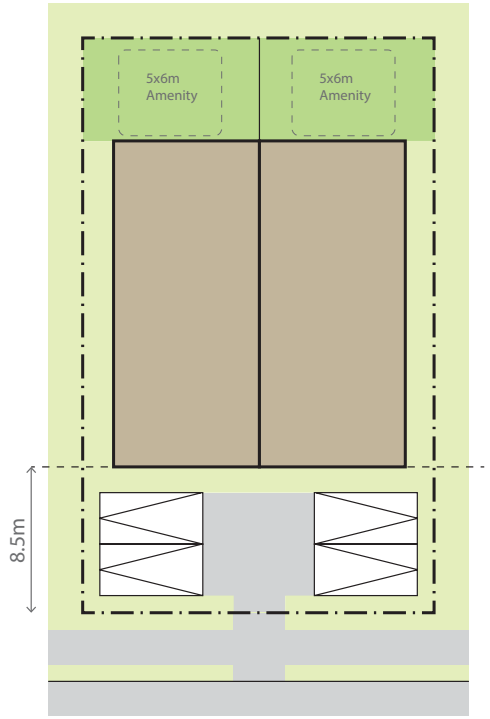


Figure 17 Typical design ground floor plan

Scenario achieving better design outcome

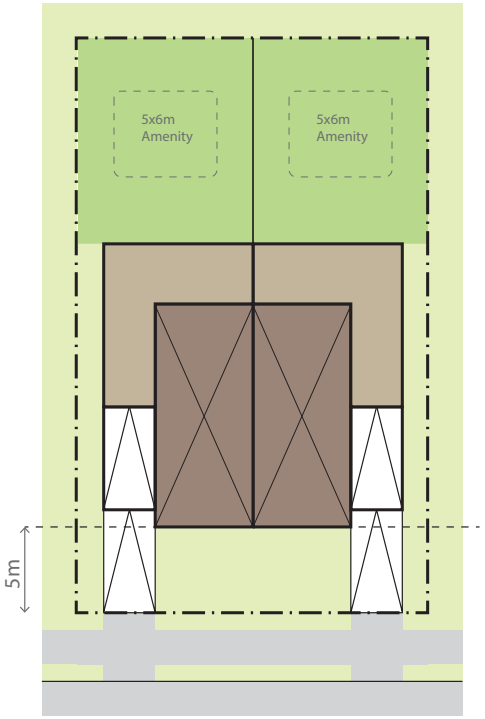


Figure 18 Better design scenario ground floor plan

The plan above shows a typical dual occupancy, site design providing two new single storey dwellings. An 8.5m street setback accommodates two parking spaces per dwelling parallel to the street. The primary private open space is located to the rear of the dwellings.

From an urban design point of view, the issues associated with this design include limited amount of landscaped area, large areas of paving and non-permeable soil, large building footprints due to single storey development and carparking that visually dominates the front setback. The impact of parking is even greater if, as is usually the case, the double garages are located within the building footprint and fronting the street.

The 'better design' scenario identifies a two storey built form located closer to the street by applying reduced front setback. As with the typical design shown adjacent, two car spaces are provided for each dwelling. The difference is the arrangement of these spaces as tandem (or stacked parking) with one car able to be parked behind the other. This design also has part of the dwelling as two storey.

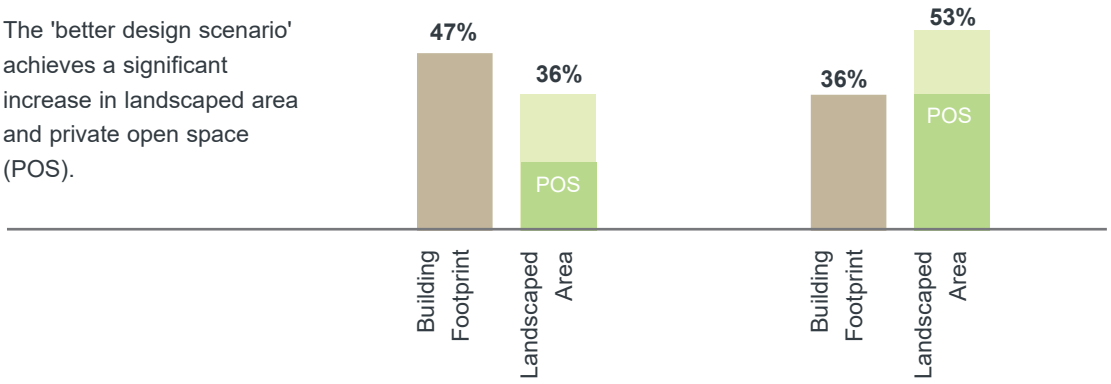
The benefits of this design are a significant increase in usable landscaped area while also increasing the overall dwelling size. There is improved visual amenity from the street due to less intrusive car parking and reduced area needed for vehicle manoeuvring and a two storey frontage which provides better surveillance to the street.

Data comparison

Area	Typical design scenario	Better design scenario
Site area	680m²	680m²
Subdivision	2 lots	2 lots
No. of storeys	1 storey	2 storeys
Building footprint	320m² (47%)	245m² (36%)
Landscaped area	245m² (36%)	365m² (53%)
GFA	270m²	320m²
FSR (gross)	**0.4:1**	**0.47:1**

Landscaped area

The 'better design scenario' achieves a significant increase in landscaped area and private open space (POS).



Recommendations

	Current controls*	Recommended controls
Lot size	min. 500m²	min. 500m²
FSR	max. 0.5:1	max. 0.5:1
Landscaped area	min. 30%	**min. 35%**
Front setback	6.0 to 7.5m (8.5m drawn)	**min. 4.5m** (5.0m drawn)
Side setback	min. 0.9m (1.5m drawn)	**min. 1.2m** (1.5m drawn)
Rear setback	min. 3.0m (6m drawn)	**min. 5m** (12m drawn)
Parking arrangement	Tandem parking not allowed Entry/ exit in forward direction	**Tandem parking permissible** **Exit in reverse direction permissible**

* Current controls: Shoalhaven DCP 2014 Chapter G13: Dual Occupancy Development

Scenario 2 - Row housing (standard lot)

Typical design compliant with current controls

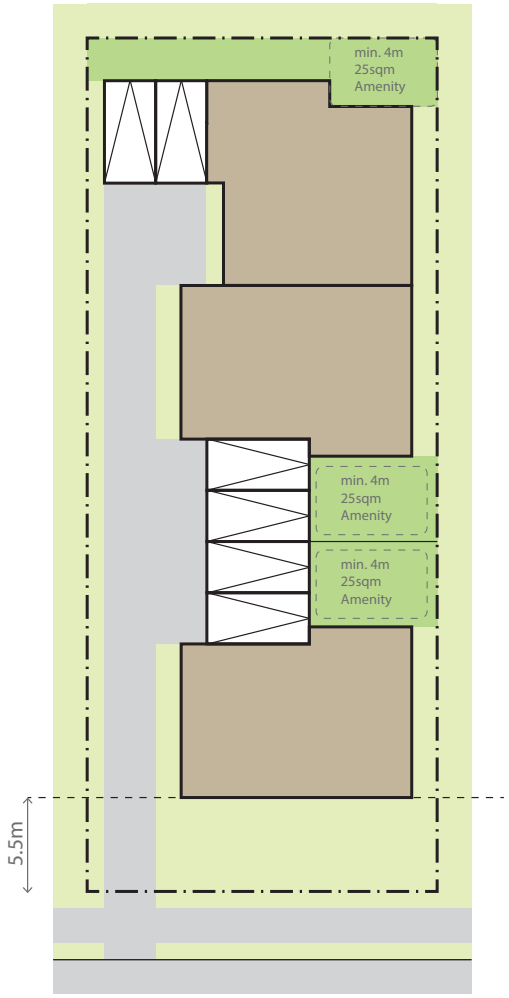


Figure 19 Typical design ground floor plan

The 'business as usual' design shows three, single storey dwellings, located on a typical lot (50m x 20.5m). Each dwelling has two car parking spaces on site which are accessed via a shared driveway. A 5.5m front setback is provided. The private open space for each dwelling has been provided towards the side boundary.

Key issues include the large area dedicated to vehicle access and parking, the poor quality outlook for dwellings and the small area of useable private open space.

Scenario achieving better design outcome

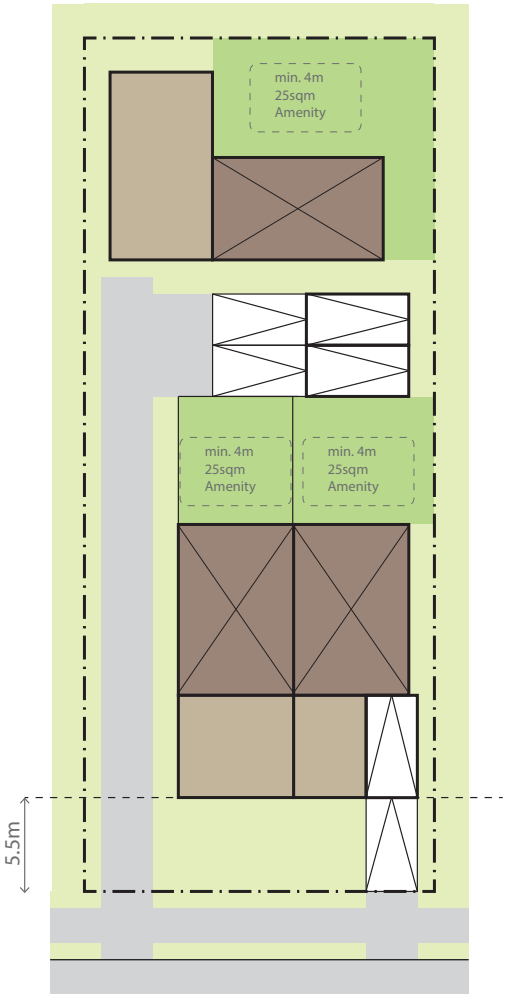


Figure 20 Better design scenario ground floor plan

The 'better design' scenario applies the same front setback, but adds a second floor and rotates two of the three dwellings so that they address the street. A single garage fronting the street is provided to one dwelling near the side boundary. On the other side of the lot, two dwellings share a shorter driveway (compared with the BAU scenario) for vehicle access and parking is in a tandem arrangement.

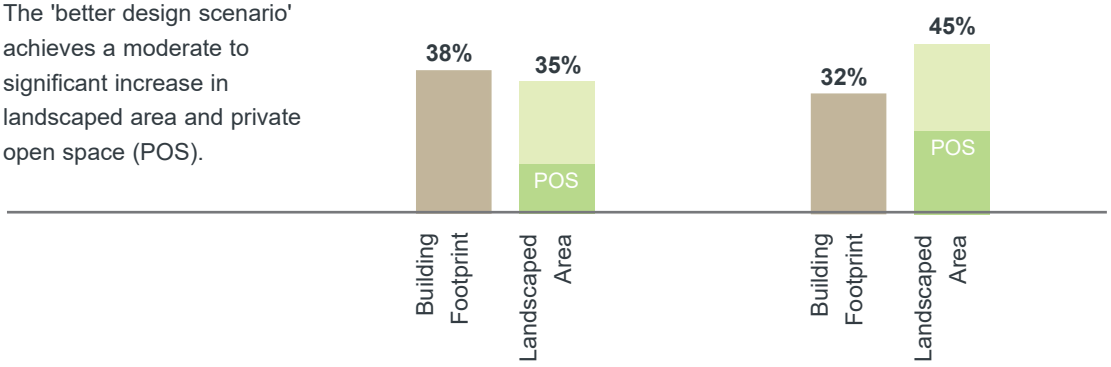
The dwelling to the rear has been moved and rotated so it faces the driveway, increasing safety, surveillance and visual amenity from the street. This design achieves more floor space and significantly more useable landscaped area.

Data comparison

Area	Typical design scenario	Better design scenario
Site area	1,025m²	1,025m²
Subdivision	3 lots	3 lots
No. of storeys	1 storey	2 storeys
Building footprint	390m² (38%)	330m² (32%)
Landscaped area	355m² (35%)	460m² (45%)
GFA	330m²	445m²
FSR (gross)	**0.32:1**	**0.43:1**

Landscaped area

The 'better design scenario' achieves a moderate to significant increase in landscaped area and private open space (POS).



Recommendations

	Current controls*	Recommended controls
Lot size	min. 500m²	**min. 1,000m²**
FSR	max. 0.35:1	**max. 0.5:1**
Landscaped area	min. 35%	**min. 35%**
Front setback	6 to 7.5m (5.5m drawn)	**min. 4.5m** (5.5m drawn)
Side setback	min. 0.9m (1.0-1.5m drawn)	**min. 1.2m** (1.0-1.5m drawn)
Rear setback	min. 3m (2.5m drawn)	**min. 4m** (2.0-7.0m drawn)
Parking arrangement	Tandem parking not allowed Entry/ exit in forward direction	**Tandem parking permissible** **Exit in reverse direction permissible**

* Current controls: Shoalhaven DCP 2014 Chapter G12: Dwelling Houses

Scenario 3 - Row housing (corner lot)

Typical design compliant with current controls

Figure 21 Typical design ground floor plan

Scenario achieving better design outcome

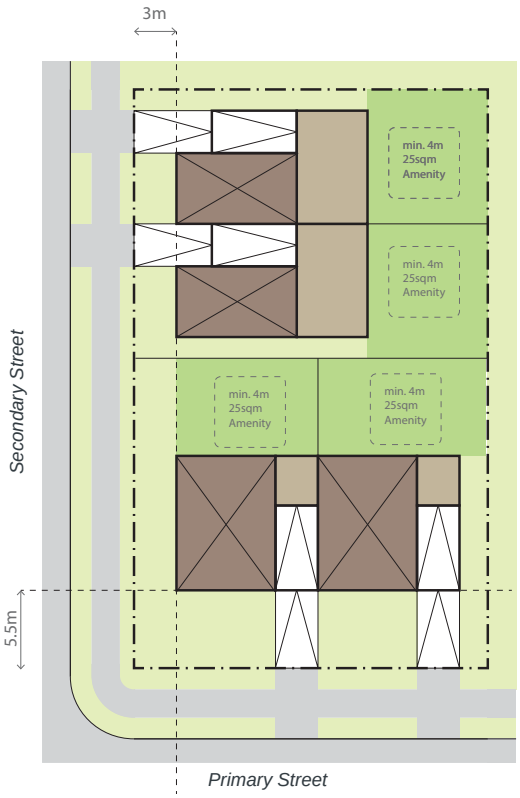


Figure 22 Better design scenario ground floor plan

The BAU design for this typical corner site shows three new single storey dwellings with two parking spaces each. A 5.5m setback has been provided on the primary street and a 3.0m setback to the secondary street. Private open space is located to the rear of the dwellings along the side boundary. Vehicle access is provided via two driveways, one of which is shared. All vehicles can exit in a forward direction.

Key issues include the large footprints of the single storey dwellings, the large area dedicated to vehicle access, poor quality outlook for dwellings, a low amount of landscaped area and the small size of the useable private open spaces.

The 'better design' scenario applies the same front setback, but adds a second floor. This, combined with the dual street frontage, allows additional density while still providing increased landscaped area. All dwellings address the street. An internal driveway is not required as vehicle access and parking is in a tandem arrangement.

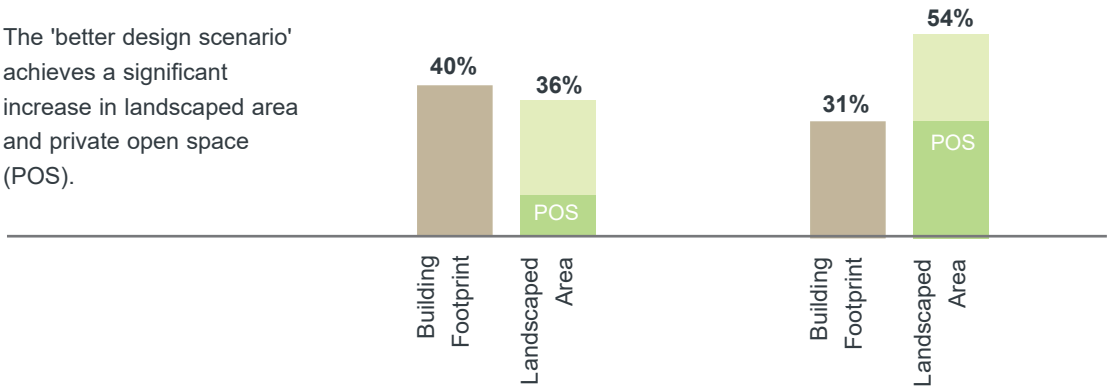
Reduces the area required for vehicle manoeuvring on site, creates more efficient layouts and additional space for landscaping. More of the dwellings face the street increasing safety, surveillance and visual amenity from the street. This design achieves increased floor space and significantly more useable landscaped area.

Data comparison

Area	Typical design scenario	Better design scenario
Site area	1,020m²	1,020m²
Subdivision	3 lots	4 lots
No. of storeys	1 storey	2 storeys
Building footprint	410m² (40%)	320m² (31%)
Landscaped area	375m² (36%)	560m² (54%)
GFA	350m²	455m²
FSR (gross)	**0.34:1**	**0.44:1**

Landscaped area

The 'better design scenario' achieves a significant increase in landscaped area and private open space (POS).



Recommendations

	Current controls*	Recommended controls
Lot size	min. 500m²	**min. 1,000m²**
FSR	max. 0.35:1	**max. 0.5:1**
Landscaped area	min. 35%	**min. 35%**
Front setback (primary street)	6.0 to 7.5m (5.5m drawn)	**min. 4.5m** (5.5m drawn)
Front setback (secondary street)	min. 3.5m (3.0m drawn)	**min. 3.0m** (3.0m drawn)
Side setback	min. 0.9m (1.5m drawn)	**min. 1.2m** (1.5m drawn)
Rear setback	min. 3.0m (8.0m drawn)	**min. 5m** (8.5m drawn)
Parking arrangement	Tandem parking not allowed Entry/ exit in forward direction	**Tandem parking permissible** **Exit in reverse direction permissible**

* Current controls: Shoalhaven DCP 2014 Chapter G12: Dwelling Houses

Scenario 4 - Row housing (deep, narrow lot)

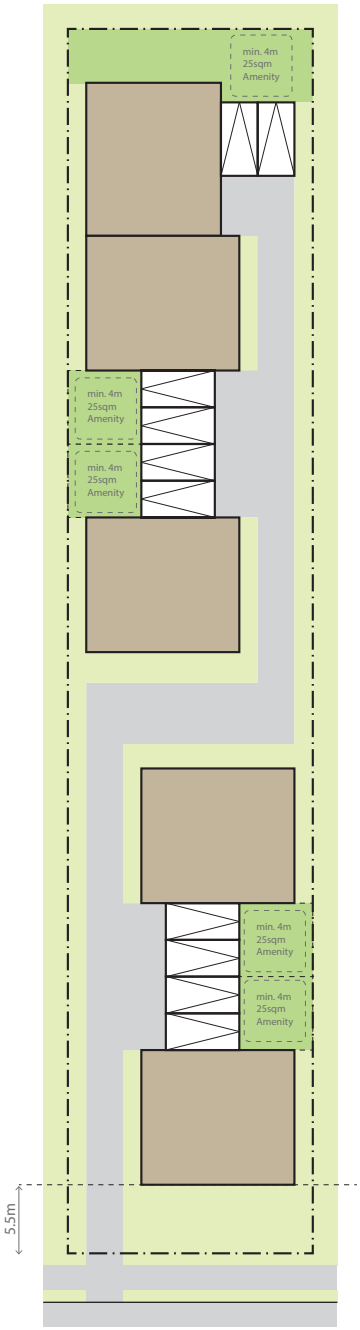
The BAU design for this deep and narrow site (100x20m) provides 5 new single storey units, with 2 parking spaces per unit. Each dwelling has two car parking spaces on site which are accessed via a shared driveway. A 5.5m front setback is provided. The private open space for each dwelling has been provided towards the side boundary and at the rear of the site. The driveway flips sides mid block to avoid a long view of the driveway from the street.

Key issues include the large area dedicated to vehicle access and parking, the poor quality outlook for dwellings and the small area of useable private open space.

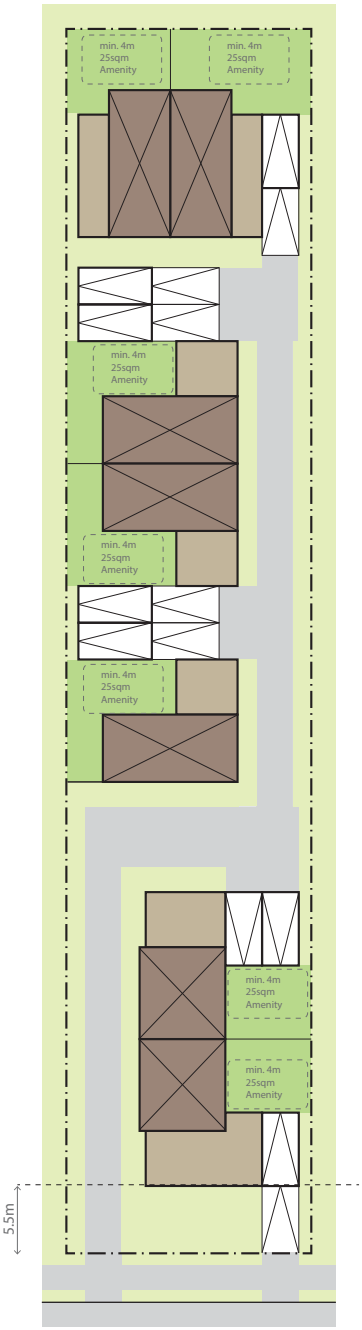
The 'better design' scenario applies the same front setback, but adds a second floor and rotates the front dwelling so it addresses the street. A single garage fronting the street is provided to this dwelling near the side boundary.

Other dwellings share a shorter driveway (compared with the BAU scenario) for vehicle access and parking is in a tandem arrangement. This allows additional density while still providing increased landscaped area.

Typical design compliant with current controls



Scenario achieving better design outcome

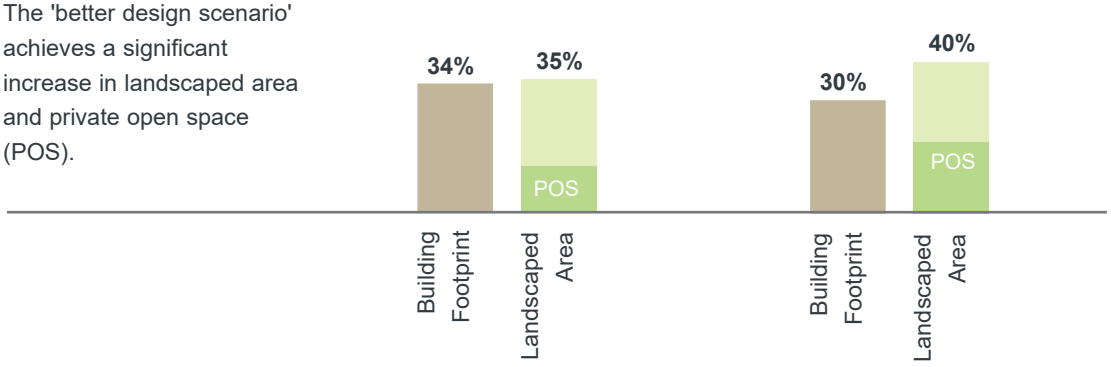


Data comparison

Area	Typical design scenario	Better design scenario
Site area	2,000m²	2,000m²
Subdivision	5 lots	7 lots
No. of storeys	1 storey	2 storeys
Building footprint	690m² (34%)	600m² (30%)
Landscaped area	700m² (35%)	790m² (54%)
GFA	585m²	855m²
FSR (gross)	**0.29:1**	**0.43:1**

Landscaped area

The 'better design scenario' achieves a significant increase in landscaped area and private open space (POS).



Recommendations

	Current controls*	Recommended controls
Lot size	min. 500m²	**min. 1,000m²**
FSR	max. 0.35:1	**max. 0.5:1**
Landscaped area	min. 35%	**min. 35%**
Front setback (primary street)	6.0 to 7.5m (5.5m drawn)	**min. 4.5m** (5.5m drawn)
Side setback	min. 0.9m (1.5m drawn)	**min. 1.2m** (1.0m drawn)
Rear setback	min. 3.0m (4.5m drawn)	**min. 5.0m** (5.0m drawn)
Parking arrangement	Tandem parking not allowed Entry/ exit in forward direction	**Tandem parking permissible** **Exit in reverse direction permissible**

* Current controls: Shoalhaven DCP 2014 Chapter G12: Dwelling Houses

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