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HORNSBY RURAL LANDS STUDY – DRAFT LANDSCAPE AREAS

DRAFT
SEPTEMBER 2019

Prepared for
Hornsby Shire Council

Independent
insight.



RMCG

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EXECUTIVE SUMMARY

Thirteen landscape areas have been identified within the Hornsby LGA. A landscape area is defined based on observable elements, such as landform, waterform, vegetation, buildings, lot sizes and topography. The landscape areas have been identified to help Council plan for the future of Hornsby's rural area, and responding to State government requirements for place-based planning.

A landscape area is defined by the unique interplay between several elements that make up how a place looks and feels. This is fundamental to the place-based concept of planning: identifying a place based on its look and feel, and preparing policies that support and enhance that sense of place.

A requirement for place-based planning

Objective 29 of the *Greater Sydney Regional Plan*, states 'place-based approaches for landscape units within the Metropolitan Rural Area will help manage its environmental, social and economic values and maximise the productive use of the land.' In addition, Action 69 from the *Northern District Plan* directs Council to 'maintain and enhance the values of the Metropolitan Rural Area using place-based planning, to deliver targeted environmental, social and economic outcomes.'

To meet this requirement, Hornsby Shire Council has commissioned a 'landscape area' assessment (this document). The assessment involved identifying environmental and social values within each distinct part of the rural lands. A market analysis and other land use investigations are also being undertaken as part of the broader Rural Lands Study.

The landscape area assessment approach involved establishing how the underlying landform, geomorphology, vegetation and waterform affects the way a landscape looks and feels. This was combined with a review of settlement patterns (land use, development, lot sizes), to form the basis of the draft landscape areas.



Desktop analysis and site visit

Several sources were consulted to prepare preliminary landscape areas for Hornsby:

- IBRA sub-regions (detailed below)
- Vegetation coverage, geological profile and waterways
- Planning zones
- Land use and development patterns, lot/subdivision size
- Hornsby Shire biodiversity strategy (2006).

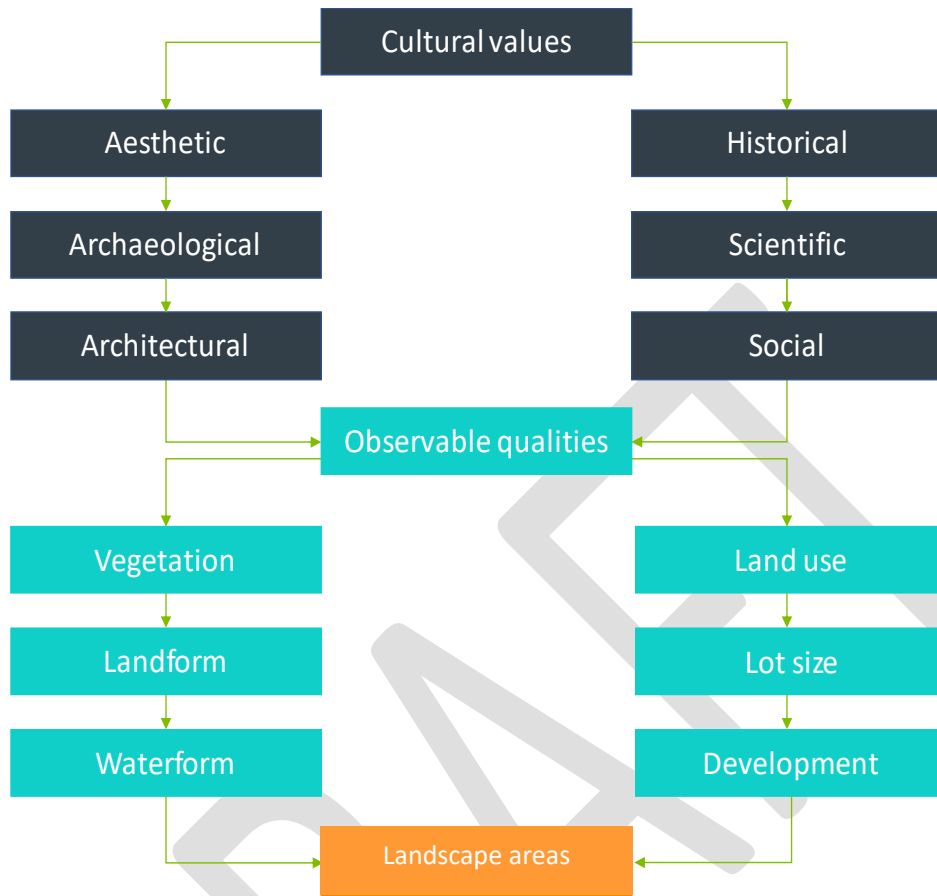
In addition, the project team conducted a guided site survey of the rural area with Council officers, to hear more about land use patterns, development pressures and other features of the rural area across the Hornsby LGA.

In the next stage of the project, the draft landscape areas will be tested and refined with community members. Local knowledge will enhance the way each place is described, so that it is recognisable to the people who live in each different landscape area. Community input will also help inform a vision for the preferred character in each landscape area.

Process for defining landscape areas

Background research for the landscape areas included reviewing the following information:

DEFINING AND CHARACTERISING LANDSCAPE AREAS



Source: SGS Economics and Planning, based on various sources, 2019.

Landscape areas underpin future planning directions

As set out in Chapter 1, the NSW Government has set out actions for councils to identify and protect landscape character, as well as to manage land use and development in rural areas. This requirement, alongside actions Hornsby Shire Council's own strategies and actions for rural areas, emphasises that planning for rural areas must balance the many roles and functions of non-urban lands, including the amenity and biodiversity benefits of rural and natural landscapes.

Based on a review of background materials, current planning zones, lot size analysis and landform characteristics, thirteen draft landscape areas have been identified, as set out below.

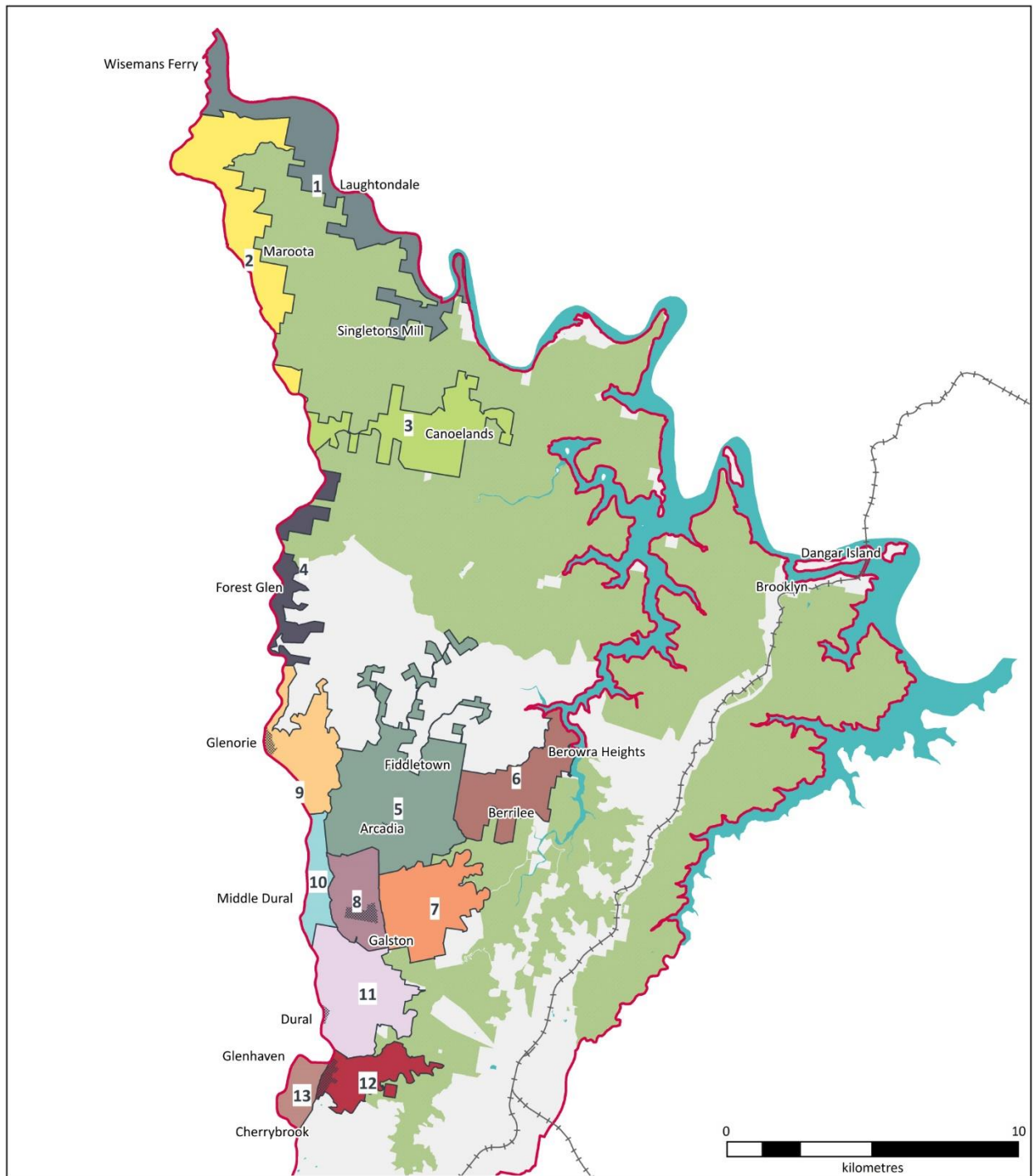
Draft landscape areas

The draft landscape areas are (north to south):

- Riverlands
- Sand Belt Agriculture
- Canoelands
- Forest Glen Spine
- Sandstone Plateau Ridgeline
- Berowra Valley North
- Berowra Valley South
- Galston Plateau
- Northern Ridgeline
- Southern Ridgeline
- Dural Plateau
- Tunks Creek
- Georges Creek.

These landscape areas are illustrated in the map overleaf.

DRAFT LANDSCAPE AREA BOUNDARIES



Legend

- Hornsby Shire boundary
- Draft landscape unit boundaries
- Rural village area
- National park or nature reserve
- Not included in study (crown land or urban area)
- Waterway
- Railway network

Draft landscape areas

- | | |
|---|--|
| <ul style="list-style-type: none"> [1] Riverlands [2] Sand Belt Agriculture [3] Canoelands [4] Forest Glen Spine [5] Sandstone Plateau Ridgeline [6] Berowra Valley North [7] Berowra Valley South | <ul style="list-style-type: none"> [8] Galston Plateau [9] Northern Ridgeline [10] Southern Ridgeline [11] Dural Plateau [12] Tunks Creek [13] Georges Creek |
|---|--|

Source: SGS Economics and Planning, 2019.

1. INTRODUCTION

The *Greater Sydney Regional Plan* and the *North District Plan* require local Councils to identify and define areas of landscape character and significance within their Metropolitan Rural Area. Landscape character is defined as the interplay between landform, waterform, vegetation, development, land use, lot sizes and other activities that affect a space. Significant landscapes may be iconic and exemplary of a region, something that invokes a special sense of place and is instantly recognisable.

1.1 What is a landscape area?

This project will examine what different landscape areas there are within Hornsby's Metropolitan Rural Area (rural areas or rural lands), which is the *Rural Lands Study* boundary.¹ The rural lands in Hornsby contain a wide range of land uses, settlement patterns and development, from productive agriculture, to sand mining, some light industrial to service urban and rural populations, rural residential and hobby farms, to non-rural uses such as private secondary schools and churches.

Defining 'landscape areas' is a technique used to specify the look and feel of different places, based on composite visual features, both natural and resulting from development/subdivision patterns. The identification of landscape areas in Hornsby's rural areas will enable Council and the community to articulate what is special about different rural places, and may include identifying some parts of the rural area where there is room for change. The landscape areas will inform changes (if any) that may be proposed to the planning zones and other controls in rural areas, to achieve desired outcomes that are in keeping with the vision for each landscape area. That discussion will be explored further in the next stages of this project.

Place-based planning

Objective 29 of the *Greater Sydney Regional Plan*, states 'place-based approaches for landscape units within the Metropolitan Rural Area will help manage its environmental, social and economic values and maximise the productive use of the land.' In addition, Action 69 from the *Northern District Plan* directs Council to 'maintain and enhance the values of the Metropolitan Rural Area using place-based planning, to deliver targeted environmental, social and economic outcomes.'

To meet this requirement, Hornsby Shire Council has commissioned a 'landscape area' assessment (this document). The assessment involved identifying environmental and social values within each distinct part of the rural lands. A market analysis and other land use investigations are also being undertaken as part of the broader Rural Lands Study.

The landscape area assessment approach requires establishing how the underlying landform, geomorphology, vegetation and waterform affects the way a landscape looks and feels. This combined with a review of settlement patterns (land use, development, lot sizes), will form the basis of landscape areas (see Figure 1, overleaf).

¹ 'Metropolitan Rural Area' is a term defined by the Greater Sydney Commission for rural areas within the Greater Sydney region. In this report, the terms 'rural area' or 'rural lands' has been used.

Defining landscape areas

Identifying, documenting and capturing the different social and environmental values of landscapes across the Hornsby LGA is one way of acknowledging and protecting the environment for its intrinsic value, while also enabling current and future communities to enjoy the many wellbeing benefits that flow from contact with natural and productive landscapes alike. The diagram below (Figure 1) illustrates how landscape areas may be defined, based on cultural values and observable qualities.

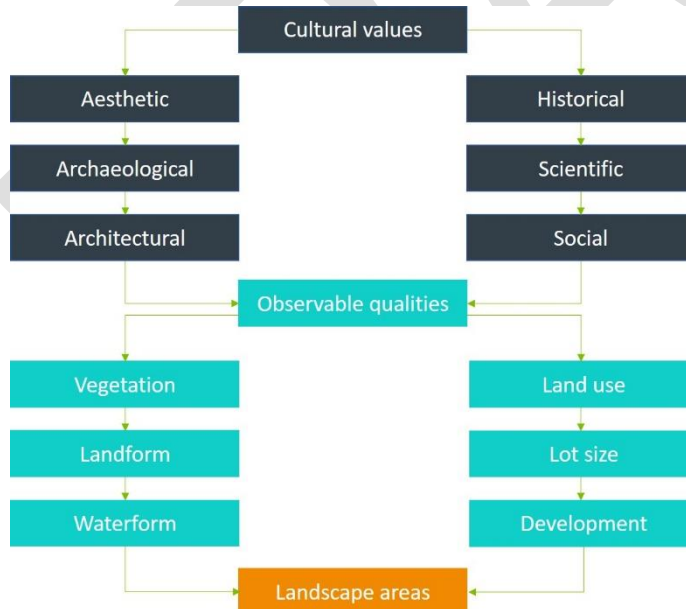
A landscape area is defined by the unique interplay between several elements that make up how a place looks and feels. This is fundamental to the place-based concept of planning: identifying a place based on its look and feel, and preparing policies that support and enhance that sense of place.

The many benefits of place-based planning and the landscape area approach include:

- conservation of biological values,
- recognition of cultural significance, and
- protection and enhancement of views and vistas that make the Hornsby LGA's rural areas the iconic places with great local and State significance within NSW and across Australia.

Some places are strongly defined by specific land uses that guarantee and sustain biological diversity. Others (for example) embody an exceptional spiritual relationship of people with nature, and are associated with the minds of the communities with powerful beliefs and artistic and traditional customs.² The cultural values of landscapes may be related to their aesthetic, archaeological, historical, scientific, social, or architectural values, any or all of which could co-exist in the one place. These values may be significant to communities at local, state, national or world (universal) levels.³

FIGURE 1: DEFINING AND CHARACTERISING LANDSCAPE AREAS



Source: SGS Economics and Planning, based on various sources, 2019.

It is noted that to date, this study has not involved engagement with Aboriginal parties. As part of the consultation with the community on the draft landscape areas, we will write to obtain feedback from the Metropolitan Local Aboriginal Land Council along with other rural land owners in the Hornsby Shire.

² United Nations Educational, Scientific and Cultural Organisation (UNESCO).

³ Heritage Council of Victoria, *Landscape Assessment Guidelines*, 2016. See also: Australia ICOMOS, *The Burra Charter: The Australia ICOMOS Charter for the Conservation of Places of Cultural Significance*, Australia ICOMOS, Canberra, (2013 ed.).

1.2 The landscape areas will inform the Rural Lands Study

A planning tool to understand different rural areas in Hornsby

To plan for different places and outcomes across Hornsby's rural area, it has been divided into smaller landscape areas.

Defining landscape areas is a planning tool that Council will use to understand what local challenges, opportunities and policies there should be in the broader *Rural Lands Study*. Currently, planning for the rural places in Hornsby is done across very large areas. This means that it is difficult to make decisions, because they will affect several diverse places, where different outcomes and more localised policies might actually be wanted.

The study will guide future planning for rural parts of the Hornsby local government area (LGA). As part of the project, several draft *landscape areas* have been identified. These landscape areas will be used to plan at a local level, based on what is unique about different rural areas across Hornsby.

This is a planning tool used to identify the look and feel of different places. It is based on the relationship between different visual features, both natural (vegetation, waterways, topography) and resulting from land use, development or subdivision patterns. The way all these features work together makes a place feel unique.

What happens next?

The identification of landscape areas in Hornsby's rural areas will enable Council and the community to articulate what is special about different places across the rural area. The landscape areas will inform changes (if any) that may be proposed to the planning zones and other controls in rural areas, to achieve desired outcomes that are in keeping with the vision for each landscape area.

1.3 Method for identifying landscape areas

Desktop analysis and site visit

Several sources have been consulted to prepare preliminary landscape areas for Hornsby:

- IBRA sub-regions (detailed below)
- Vegetation coverage, geological profile and waterways
- Planning zones
- Land use and development patterns, lot/subdivision size
- Hornsby Shire biodiversity strategy (2006).

In addition, the project team conducted a guided site survey of the rural area with Council officers, to hear more about land use patterns, development pressures and other features of the rural area across the Hornsby LGA.

Bioregions: A basis for identifying regional landscape areas

Australian bioregions capture the patterns of ecological characteristics in the landscape and underlying environmental features and patterns of use of the land, providing a natural framework to recognise and respond to biodiversity values. Bioregions are relatively large land areas characterised by broad, landscape-scale natural features and environmental processes that influence the functions of entire ecosystems. They capture the large-scale geophysical patterns across Australia. These patterns in the landscape are linked to fauna and flora assemblages and processes at the ecosystem scale, thus providing a useful means for simplifying and reporting on more complex patterns of biodiversity.⁴

⁴ NSW National Parks and Wildlife Service, 2016, *Bioregions Explained*, Available from URL: <<https://www.environment.nsw.gov.au/bioregions/BioregionsExplained.htm>>.

Generally, this dataset is used to understand and plan for biodiversity conservation across a broad region. However, it also provides very useful information that underpins how a place looks and feels, as a starting point for the landscape area assessment.

Under the *Interim Bio-regionalisation for Australia* (IBRA) classification system, the Hornsby LGA is located within the Sydney Basin region, described as follows:

The Sydney Basin Bioregion lies on the central east coast of NSW and covers an area of approximately 3,624,008 ha (IBRA 5.1). It occupies about 4.53% of NSW and is one of two bioregions contained wholly within the state. The bioregion extends from just north of Batemans Bay to Nelson Bay on the central coast, and almost as far west as Mudgee. The bioregion is bordered to the north by the North Coast and Brigalow Belt South bioregions, to the south by the South East Corner Bioregion and to the west by the South Eastern Highlands and South Western Slopes bioregions.

As well as Sydney itself, the Sydney Basin Bioregion encompasses the towns of Wollongong, Nowra, Newcastle, Cessnock, Muswellbrook and Blue Mountains towns such as Katoomba and Mt Victoria. It includes a significant proportion of the catchments of the Hawkesbury Nepean, Hunter and Shoalhaven river systems, all the smaller catchments of Lake Macquarie, Lake Illawarra, Hacking, Georges and Parramatta Rivers, and smaller portions of the headwaters of the Clyde and Macquarie rivers.⁵

The extent of each IBRA sub-region within Hornsby is shown in the map overleaf: Figure 2.

⁵ NSW National Parks and Wildlife Service, 2003, *The Bioregions of New South Wales: their biodiversity, conservation and history*, NSW National Parks and Wildlife Service, Sydney.

2. DRAFT LANDSCAPE AREAS

2.1 Defining landscape areas for Hornsby's rural areas



Landscape areas underpin future planning directions

As set out in Chapter 1, the NSW Government has set out actions for councils to identify and protect landscape character, as well as to manage land use and development in rural areas. **This requirement, alongside actions Hornsby Shire Council's own strategies and actions for rural areas, emphasises that planning for rural areas must balance the many roles and functions of non-urban lands, including the amenity and biodiversity benefits of rural and natural landscapes.**

Based on a review of background materials, current planning zones, lot size analysis and landform characteristics, thirteen draft landscape areas have been identified, as set out below.

Draft landscape areas

The draft landscape areas are (north to south):

- Riverlands
- Sand Belt Agriculture
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- Berowra Valley South
- Galston Plateau
- Northern Ridgeline
- Southern Ridgeline
- Dural Plateau
- Tunks Creek
- Georges Creek.

These landscape areas are illustrated in the map overleaf (Figure 3).

Rural towns and villages

Rural towns and villages are scattered within Hornsby's Metropolitan Rural Area. They are distinct from urban areas in that they provide mainly for local residential needs, as distinct from the needs of those living in metropolitan areas. They service people and businesses in surrounding rural areas, and visitors to the area. Some increases in population can drive demand for expansion of rural towns and villages, together with an associated increased demand for the provision of infrastructure such as sewerage, water, telecommunications, waste facilities and roads. In some instances, further expansion may not be possible or appropriate due to wastewater limitations, environmental capability, vegetation with conservation significance, flood or bushfire risk.

The rural towns and villages within Hornsby's rural area are Dural, Galston, Glenorie, and Wisemans Ferry. Middle Dural, Forest Glen and Maroota are a very small service centres on the Old Northern Road. In Forest Glen and Maroota, a small number of services are found along the roadside, where rural residential properties are closer to the road.

Terminology

Throughout the following chapters, average and median lot sizes are presented for each landscape area. To provide a better idea of what a "typical" lot is like in each landscape area, the median lot size has also been shown. The median is generally considered to be the best

representative of the central location in data. It demonstrates the lot size that is most characteristic of lot sizes in the landscape area. Where there is a large difference between the median and the average, the median is taken to be the more reliable number.

Data for all landscape areas is presented in Table 1, and the draft landscape areas are shown overleaf on Figure 3. The columns depict:

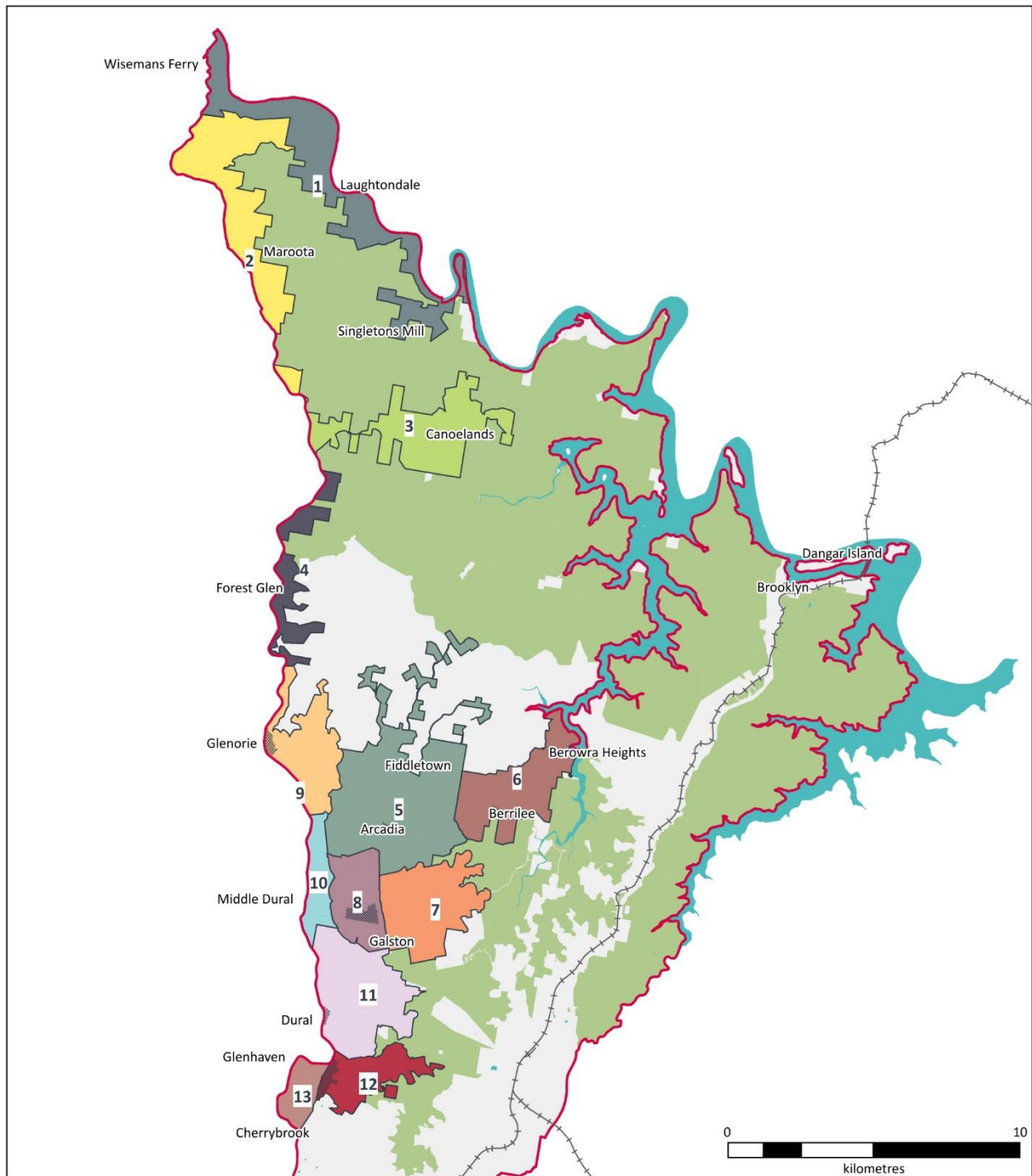
- Median lot size: Typical lot size across the landscape area
- Average dwelling size: The average area of a building footprint (the amount of the building that covers ground level), in square metres
- Landscape area in E3 (%): The proportion of total landscape area that is covered by the E3 (Environmental Management) Zone
- Average lot area in E3 (%): The average part of a lot (property) covered by the E3 Zone.

TABLE 1: LOT SIZES AND CHARACTERISTICS

Landscape area	Median lot size	Average dwelling size	Landscape area in E3 (%)	Average lot area in E3 (%)
Riverlands	5.3 hectares	150 sqm	65%	73%
Sand Belt Agriculture	11.74 hectares	220 sqm	45%	25%
Canoelands	10.83 hectares	200 sqm	44%	32%
Forest Glen Spine	8.85 hectares	250 sqm	38%	27%
Sandstone Plateau Ridgeline	2.13 hectares	250 sqm	28%	17%
Arcadia rural village	2,000 sqm	210 sqm	0%	0%
Berowra Valley North	6.18 hectares	200 sqm	52%	28%
Berowra Valley South	2.03 hectares	250 sqm	21%	17%
Galston rural village	900 sqm	260 sqm	0%	0%
Galston Plateau	2.02 hectares	270 sqm	9%	7%
Northern Ridgeline	2.03 hectares	330 sqm	16%	9%
Glenorie	1,000 sqm	260 sqm	0%	0%
Southern Ridgeline	2.03 hectares	280 sqm	10%	13%
Dural Plateau	2.02 hectares	310 sqm	20%	18%
Dural village	1,300 sqm	340 sqm	0%	3%
Tunks Creek	2.03 hectares	360 sqm	31%	22%
South Dural Industrial area	1.89 hectares	800 sqm	8%	1%
Georges Creek	2.32 hectares	280 sqm	7%	5%

Source: SGS Economics and Planning, 2019.

FIGURE 3: PRELIMINARY LANDSCAPE AREA BOUNDARIES



Legend

- Hornsby Shire boundary
- Draft landscape unit boundaries
- Rural village area
- National park or nature reserve
- Not included in study (crown land or urban area)
- Waterway
- Railway network

Draft landscape areas

- | | |
|--|--|
| <ul style="list-style-type: none"> [1] Riverlands [2] Sand Belt Agriculture [3] Canoelands [4] Forest Glen Spine [5] Sandstone Plateau Ridgeline [6] Berowra Valley North [7] Berowra Valley South | <ul style="list-style-type: none"> [8] Galston Plateau [9] Northern Ridgeline [10] Southern Ridgeline [11] Dural Plateau [12] Tunks Creek [13] Georges Creek |
|--|--|

Source: SGS Economics and Planning, 2019.

3. RIVERLANDS

3.1 Description

The Riverlands landscape area covers agricultural, environmental management and wetlands along the Hawkesbury River, from Wisemans Ferry to Singletons Mill. This area is defined by the riverine environment, which presents as a broad, flat plain defined by the Hawkesbury River on the north, and framed by a steep, sandstone escarpment and the boundary of the Marramarra National Park.

Driving along Singleton Road affords excellent and iconic views of the landscape area, which is defined by its remoteness, some agricultural activity, and the dramatic transition from steep rock escarpment to flat river floodplain. The escarpment is covered in bushland, while rural uses dot the floodplain.

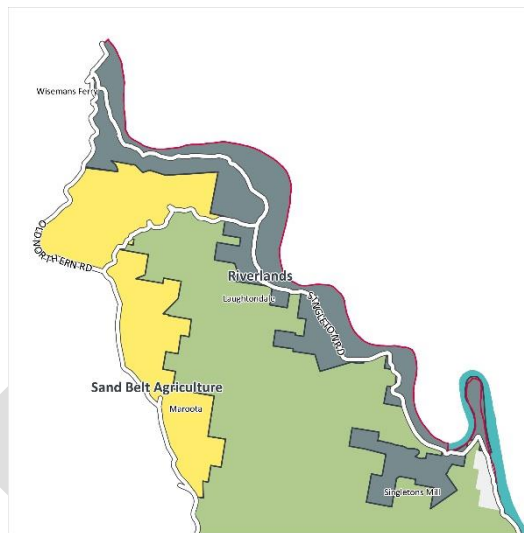


FIGURE 4: VIEWS OVER THE HAWKESBURY RIVER FROM WISEMANS FERRY



Source: SGS Economics and Planning, 2019.

One Tree Beach Wetland is an example of remnant vegetation with high conservation values, providing an opportunity to see endangered vegetation communities of Swamp Mahogany Forest, Floodplain Reedland, Forest Red Gum River-flat, Swamp Oak Floodplain Forest and Coastal Saltmarsh.⁶ The wetland represents one of few intact natural wetlands in the lower Hawkesbury River and is an important local asset that is highly valued by the community.

⁶ Waratah Eco Works (for Hornsby Shire Council), *One Tree Reach Wetland Plan of Management*, 2013.

Lot sizes and land use characteristics

Lots in this landscape area are among the most vegetated in the LGA, and on average lots have between 70-90 per cent land within the E3 Environmental Management Zone. The median lot size in this landscape area is 5.3 hectares.

The character of this landscape area is strongly defined by a sense of remoteness, where some properties are accessed more easily by water than on the land. Small boats and private jetties can sometimes be seen on the riverbank, while in other places the river waters are obscured by Swamp Oak forests, for example around the One Tree Beach Wetland.

TABLE 2: SNAPSHOT OF LOT SIZES AND CHARACTERISTICS

Landscape area	Median lot size	Average dwelling size	Landscape area in E3 (%)	Average lot area in E3 (%)
Riverlands	5.3 hectares	150 sqm	65%	73%

Source: SGS Economics and Planning, 2019.

Land use in this landscape area is a mixture of agriculture (citrus orchards, vegetable crops and some livestock) and a small number of remote rural residential lots.

FIGURE 5: VIEWS OVER THE HAWKESBURY RIVER FROM SINGLETON ROAD ARE ABUNDANT THROUGHOUT THE RIVERLANDS



Source: SGS Economics and Planning, 2019.

FIGURE 6: LIVESTOCK, CROPPING AND VIEWS TO THE MARRAMARRA NATIONAL PARK ARE COMMON IMAGES THROUGHOUT THE RIVERLANDS LANDSCAPE AREA, ACROSS THE HAWKESBURY FLOODPLAIN



Source: SGS Economics and Planning, 2019.

FIGURE 7: VEGETATION TYPES IN THE RIVERLANDS



Swamp Oak Floodplain Forest, Singletons Mill

Source: SGS Economics and Planning, 2019 (L), P & J Smith Consultants, 2008 ®.

FIGURE 8: ONE TREE BEACH WETLAND, OFF SINGLETON ROAD IN THE RIVERLANDS



Source: SGS Economics and Planning, 2019.

3.2 Rural villages within this landscape area

Wisemans Ferry

Wisemans Ferry is a rural village located at the confluence of the Macdonald and Hawkesbury Rivers, at the north-western extent of the Hornsby LGA. Like Glenorie, part of the town is located within the Hills Shire LGA, and only a small part of the B2 Local Centre Zone applies within the Hornsby LGA. The town contains a grocer, petrol station, post office, bowling club, restaurants, a campground, golf course, and Wisemans Ferry Public School. There are two river crossings over the Hawkesbury: Webbs Creek Ferry and Wisemans Ferry.

Wisemans Ferry slopes dramatically from the ridgeline at Old Northern Road down towards the river floodplain and there are few houses within the town centre itself. Rural residential development extends along Singleton Road, which follows the river course to the south-east and into agricultural lands on the river flats. The town is defined by views to the Marramarra National Park, which rises steeply to the south, and presents dark greens and browns of eucalyptus forests.

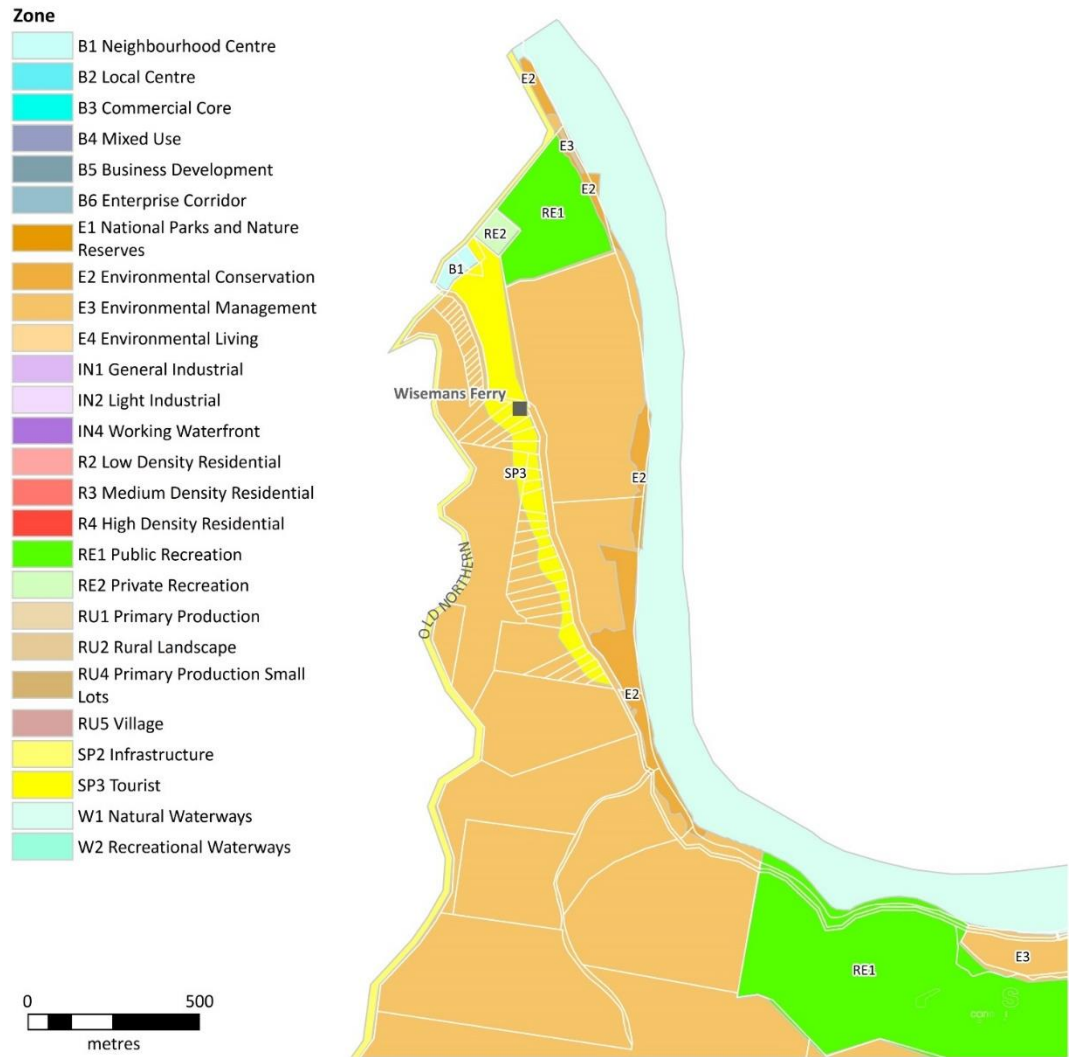
FIGURE 9: WISEMANS FERRY



Source: SGS Economics and Planning, 2019.

Due to the topography in Wisemans Ferry, there are very few small lots within the village itself. Some lots ranging between 500 to 2,500 square metres are located on Singleton Road, where residential properties are clustered close to the centre. In this location, the lots (zoned E3 Environmental Management) are very steep and directly abut densely vegetated hillsides.

FIGURE 10: ZONING AROUND WISEMANS FERRY RURAL TOWN



Source: SGS Economics and Planning, 2019.

The part of Wisemans Ferry village contained within Hornsby LGA contains the bowls club and recreation reserve, local supermarket, pharmacy and pub.

The character of the village centre is defined by its steep topography, with long-ranging views to the Hawkesbury River (from the flats and floodplain), the hills of the Marramarra National Park behind, and the hills and escarpment of the Dharug National Park ahead. Dwellings around the village centre have a rural feel, often constructed with timber and corrugated iron roofs, set into the hill and surrounded by a mixture of exotic gardens and native vegetation as the hills become steeper. Beyond the main street, most parts of Wisemans Ferry have a very remote feel, nestled within the steeply rising hills and escarpment, filtered with very tall trees and shrubby vegetation.

4. SAND BELT AGRICULTURE

4.1 Description

The area around Maroota has significantly different landform to other productive agricultural areas in the LGA. It sits partly on the Maroota Sands landform, characterised by very sandy soils and heathland-type vegetation reminiscent of a coastal setting. In this location, there are several sand mines, which are also interspersed with horticulture and cropping.

This landscape area is set at a higher elevation, and follows Old Northern Road with development clustered around finger-like roads that wind into the agricultural lands beyond. Farms are typically surrounded by the northern reaches of the Marramarra National Park, and darker, treed horizons are seen when travelling through the landform, alongside enclosed views from lower points in valleys. There are points where the underlying landform changes starkly, from siliceous (sandy) soils, to earthy sands and granites (further south, approaching Canoelands). There, taller trees and bracken understorey replace Banksia and heath-like woodland vegetation of the sandy soils.

Cropping in this landscape area occurs on larger agricultural lots, with some shelterbelt planting along boundaries or between paddocks. Sand mines are not immediately visible from the road, but are recognised by large earth banks screening the open cut aspects from views on the roadside.

Lot sizes and land use characteristics

The median lot size in this landscape area is 11.74 hectares. The landscape area is defined by clear boundaries of the Marramarra National Park, where the productive agricultural lands are small extrusions into a highly vegetated landscape with great variation, as highlighted above. There are several highpoints where views are afforded over valleys to adjoining ridgelines, and travelling down more remote roads often ends in wetter forest gullies with very tall trees.

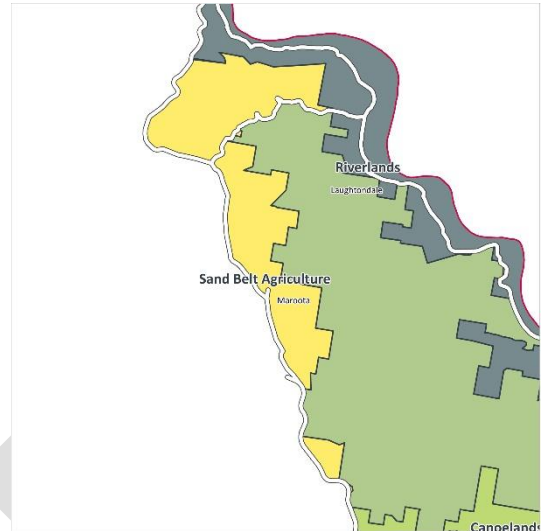
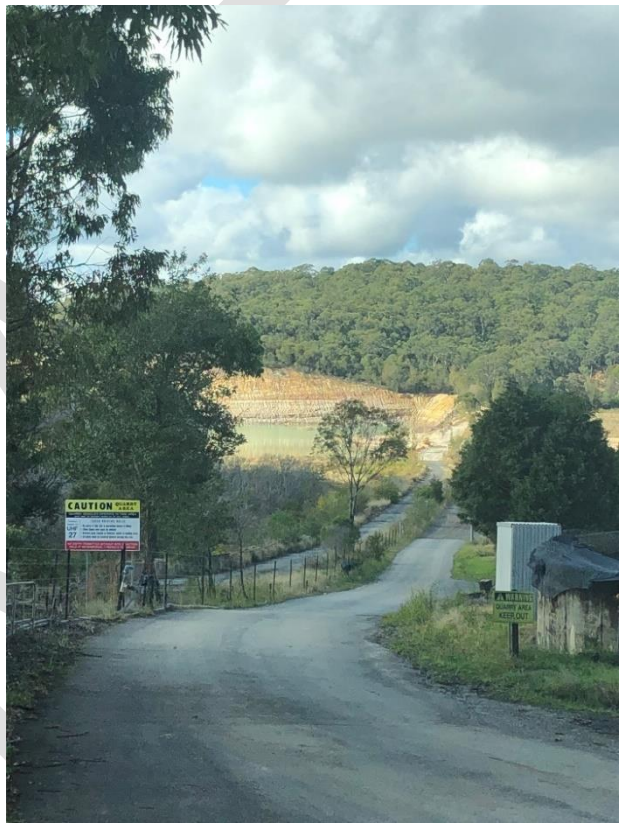


TABLE 3: SNAPSHOT OF LOT SIZES AND CHARACTERISTICS

Landscape area	Median lot size	Average dwelling size	Landscape area in E3 (%)	Average lot area in E3 (%)
Sand Belt Agriculture	11.74 hectares	220 sqm	45%	25%

Source: SGS Economics and Planning, 2019.

FIGURE 11: CROPPING AND SAND MINING AROUND MAROOTA

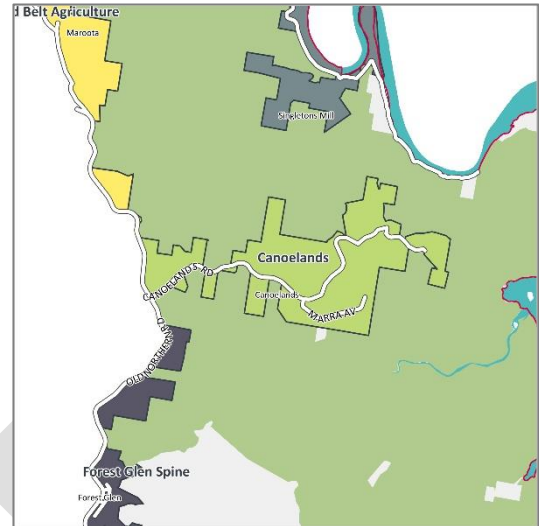


Source: SGS Economics and Planning, 2019.

5. CANOELANDS

5.1 Description

The Canoelands landscape area sits within Marramorra National Park and north of the Marramorra Creek. Private property and farmland are clustered around Canoelands Road, and active farming is predominantly made up of seasonal horticulture, often with orchards and groves covered in netted structures. This creates a patchwork of productive landscapes which are contrasted against the darker green horizons of the Marramorra National Park. This landscape area is relatively remote, with single access via Canoelands Road.



The Canoelands spine peels away from Old Northern Road at a high point, and farmland is located along a broader (but still gently undulating) plain framed with creek valleys. Exotic shelterbelt plantings are prominent along property boundaries and the road verges in this landscape area, and remnant vegetation often frames roadsides, creating filtered views which open out into broad vistas of orchards and agricultural structures. Patches of siliceous sands overlapping with the underlying Maroota landform are sometimes visible, transitioning to darker soils where horticulture is seen. In some locations, there are long-ranging views over nearby creek valleys where landform falls gently away from the road, revealing a ridgeline beyond.

FIGURE 12: SEASONAL HORTICULTURE IN CANOELANDS



Source: SGS Economics and Planning, 2019.

The Canoelands landscape area is in the Yengo IBRA subregion, sitting on a sandstone plateau with steep slopes top narrow creek valleys. As described above, this experience of elevation can be felt travelling along Canoelands Road, where neighbouring ridgelines can be seen to the north and south, over the valleys between. From above, the landscape appears shadowed and folded along these valley and ridgelines (Figure 13).

Lot sizes and land use characteristics

Land across Canoelands is zoned for Primary Production (small lots) and Environmental Management. The large extent of native vegetation means on average, 45 per cent of land in a property is within the E3 zone. This landscape area is defined by agricultural activity. Lot sizes are typically above 5 hectares, with most lots between 10-20 hectares and some greater than 20 hectares, especially towards the east. The median lot size is 10.38 hectares, and the patchwork of lots and land uses described above is clearly visible, where farming properties are interlaced with remnant vegetation.

TABLE 4: SNAPSHOT OF LOT SIZES AND CHARACTERISTICS

Landscape area	Median lot size	Average dwelling size	Landscape area in E3 (%)	Average lot area in E3 (%)
Canoelands	10.83 hectares	200 sqm	44%	32%

Source: SGS Economics and Planning, 2019.

FIGURE 13: AERIAL IMAGE SHOWING CANOELANDS AGRICULTURE, A SPINE ALONG CANOELANDS ROAD WHICH STRETCHES WELL INTO THE MARRAMARRA NATIONAL PARK



Source: Nearmap, 2018.

FIGURE 14: FARMING PROPERTIES THROUGHOUT THE CANOELANDS LANDSCAPE AREA



Source: SGS Economics and Planning, 2019.

6. FOREST GLEN SPINE

6.1 Description

In the northern part of the LGA around Forest Glen, is a cluster of rural properties along Old Northern Road and surrounded by dense vegetation on Crown Land and the Muogamarra National Park. Views through this landscape area are short- and mid-range, enclosed or filtered through native vegetation. This landscape area is within the Pittwater subregion and forms part of the exposed sandstone ridgeline that is traversed by Old Northern Road.

Some dispersed farming settlement and activities occur within this landscape area, with irrigated perennial and seasonal horticulture, which patterns the landscape between fingers of the national park, into which the settlement reaches. Travelling through this landscape area, the abundance of native vegetation along roadsides and into the distance is a defining feature. Small roads branch into the landscape area from Old Northern Road, providing local access and an opportunity to access secluded parts of the national park. Once off Old Northern Road, a sense of remoteness abounds.

In agricultural parts, orchards and groves are typically seen, accompanied by shade and netting structures. These parcels are often immediately adjacent to local roadsides and not fenced. Exotic vegetation and planted gardens surround farmhouses,

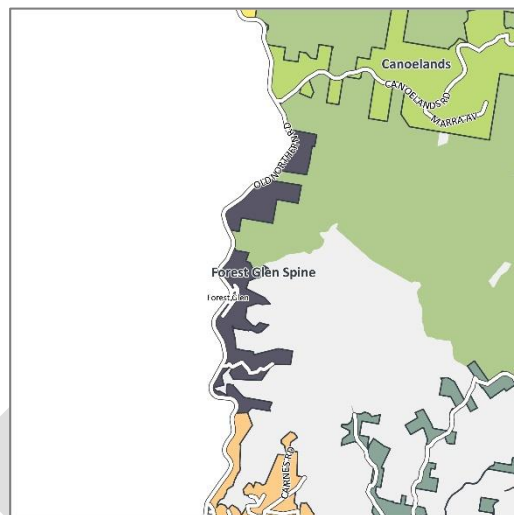
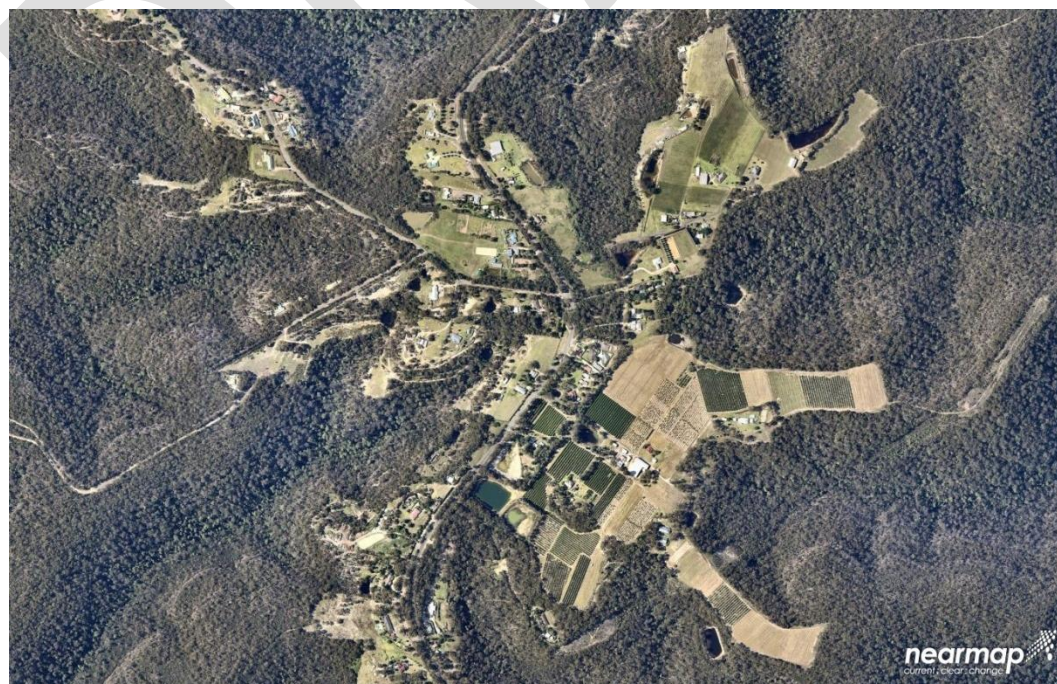


FIGURE 15: AERIAL VIEW OF FOREST GLEN



Source: Nearmap, 2018.

Lot size and land use characteristics

This Forest Glen Spine is in a RU1 Primary Production Zone, with sections of E3 Environmental Management; valley slopes are usually zoned for E3. This attribute lends a lush, deep green and brown backdrop to many views across the landscape. Almost ubiquitous are horizons softened by dense vegetation.

TABLE 5: SNAPSHOT OF LOT SIZES AND CHARACTERISTICS

Landscape area	Median lot size	Average dwelling size	Landscape area in E3 (%)	Average lot area in E3 (%)
Forest Glen Spine	8.85 hectares	250 sqm	38%	27%

Source: SGS Economics and Planning, 2019.

There are few non-agricultural uses throughout this landscape area, and lot sizes are typically above 5 hectares, with most lots between 10 and 50 hectares. Despite more large lots, the lot sizes are smaller around Forest Glen. The median lot size in this area is 8.85 hectares.

FIGURE 16: CHARACTERISTICS OF THE FOREST GLEN RIDGELINE LANDSCAPE AREA

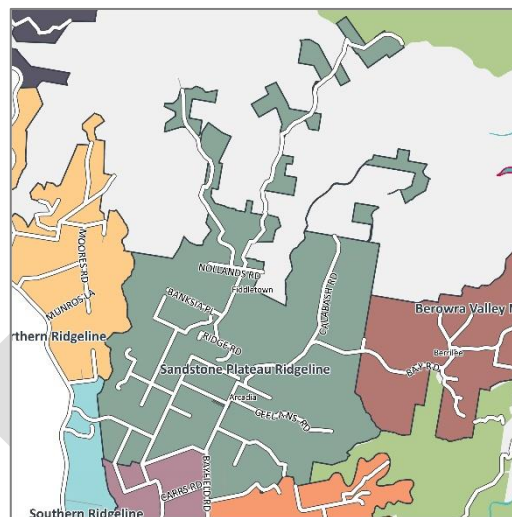


Source: SGS Economics and Planning, 2019.

7. SANDSTONE PLATEAU RIDGELINE

7.1 Description

Land north of Galston around Arcadia to Fiddletown is spread out along a central ridgeline within the Hornsby Sandstone Plateau. This landscape is folded over the Pittwater bioregion, with Hawkesbury Sandstone, and ridge cappings of Ashfield Shale. It has occasional steep cliffs and rock platforms, with tall forests often found at the bottom of valleys. Significant remnant vegetation along roadsides is a prominent feature of this landscape area's character. Remnant Turpentine and Blackbutt can be found in some parts of the landscape area.



The Arcadia to Fiddletown ridgeline is a lush landscape, where many activities are occurring, from hobby farms to ornamental horticulture and some intensive horticulture. Horses are popular throughout the area and accompanying features of the area are timber post and rail fences and stables. High quality landscaped gardens with a mixture of remnant native trees and exotic plantings are also common among the rural and rural residential properties.

Travelling through this landscape area, roads traverse gentle slopes and then dip down into damp, well-forested gullies. Views across the landscape area from higher points often afford the sense of rolling hills, where vistas over gullies connect to neighbouring ridgelines at eye level. Thick vegetation along creek lines and roadsides is very common, and a sense of lushness prevails. In this location, remnant native vegetation is tall, and rolling hills characterise mid- to long-range views. When travelling through this landscape there is a variety of views that shift between ascent to enclosure, moving through river valleys towards ridgelines.

Lot sizes and land use characteristics

Within the RU4 Zone (Small lot primary production), most land parcels are between 2 to 5 hectares, with some smaller lots between 1 and 2 hectares. In steeper areas and where the E3 Zone (Environmental management) applies, larger lots ranging from 5 to 10 hectares or greater, including up to 50 hectares, are found.

TABLE 6: SNAPSHOT OF LOT SIZES AND CHARACTERISTICS

Landscape area	Median lot size	Average dwelling size	Landscape area in E3 (%)	Average lot area in E3 (%)
Sandstone Plateau Ridgeline	2.13 hectares	250 sqm	28%	17%
Arcadia rural village	2,000 sqm	210 sqm	0%	0%

Source: SGS Economics and Planning, 2019.

Note: Areas shown for Sandstone Plateau Ridgeline exclude lots in the Arcadia rural village area to avoid skewed data.

The mixture of agricultural land uses in this landscape area include alpacas, broiler farms (few), orchards and ornamental horticulture, including nurseries. Some non-agricultural uses such as education and churches are also found, occasionally. Dwellings within this landscape area are typically very large country houses with sprawling wings, post and rail fencing and planted gardens. Across paddocks some cropping, and grazing occurs, however more common agricultural land appears to be used for horse agistment, ornamental horticulture (orchards and magnolia plantings are common). At the same time, several churches, cat/dog boarding and private secondary schools are found within this landscape area, evidence that the rural zone is providing for non-agricultural uses in locations that are still relatively close to urban areas.

This landscape area sits within the RU1 Primary Production and RU4 Primary Production Small Lots Zones, with fingers of E3 Environmental Management throughout. Around Fiddletown, valley slopes are usually zoned for E3. This attribute lends a lush, deep green and brown backdrop to many views across the landscape. Almost ubiquitous are horizons softened by dense vegetation.

FIGURE 17: LAND USES AND LANDSCAPE FEATURES ACROSS THE SANDSTONE PLATEAU RIDGELINE LANDSCAPE AREA





Source: SGS Economics and Planning, 2019.

7.2 Rural villages within this landscape area

Arcadia

The rural area of Arcadia is centred around a small rural village containing a primary school and community hall on Arcadia Road. The school and hall are surrounded by several smaller lot, rural residential properties with lot sizes around 1,000 to 2,500 square metres.

The village has a strong rural feel with lush, green vegetation, significant trees along roadsides and gravel verges along roadsides. From this village centre the landscape returns quickly to productive and ornamental horticulture, large lot hobby farms and well-vegetated national park areas.

FIGURE 18: ARCADIA GENERAL STORE, ARCADIA ROAD

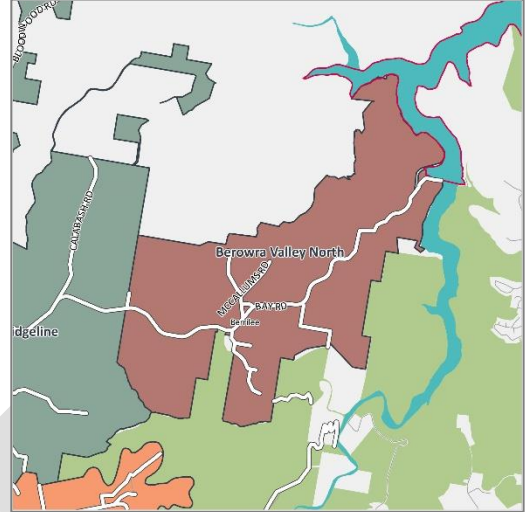


Source: SGS Economics and Planning, 2019.

8. BEROWRA VALLEY NORTH

8.1 Description

This landscape area contains the rural locality of Berrilee, connecting through to Berowra Waters and the river corridor. Access to this area is via Bay Road, and agricultural lots are clustered around this main road, with some smaller local roads branching into more densely forested valleys. The topography is gently undulating, and travelling through this area gives an experience of long-ranging views from high-points, with enclosed, short-range views to vegetation and farmland from lower points.



Agricultural activities in this area include intensive animal husbandry (horse studs), and seasonal horticulture. The area's connection to Berowra Waters, the river crossing and Dusthole Bay, the agricultural area also contains some boat-related and storage uses.

This landscape area is part of the Pittwater bioregion, underlain with Hawkesbury Sandstone, and ridge capping's of Ashfield Shale. There are excellent opportunities to experience exposed sandstone and remnant vegetation on the drive down Bay Road to Berowra Waters and the river crossing. Towards the river, narrow-leaved scribbly gums, and blue-leaved stringybark diatreme forests are found in this location, which lends a more yellow-green hue to vegetation and feels quite different to tall Turpentine forests of other landscape areas in the LGA.

Lot size and land use characteristics

This landscape area sits within the RU1 Primary Production, with E3 Environmental Management throughout. In locations closer to the Berowra River, an average 25 per cent of land is within the E3 Zone. Towards the west, valley slopes are usually zoned for E3 and dotted with remnant vegetation. This attribute creates a strong connection to the bush throughout this character area.

TABLE 7: SNAPSHOT OF LOT SIZES AND CHARACTERISTICS

Landscape area	Median lot size	Average dwelling size	Landscape area in E3 (%)	Average lot area in E3 (%)
Berowra Valley North	6.18 hectares	200 sqm	52%	28%

Source: SGS Economics and Planning, 2019.

Note: Lot calculation exclude the small waterfront lots that are zoned E4.

FIGURE 19: BEROWRA VALLEY NORTH

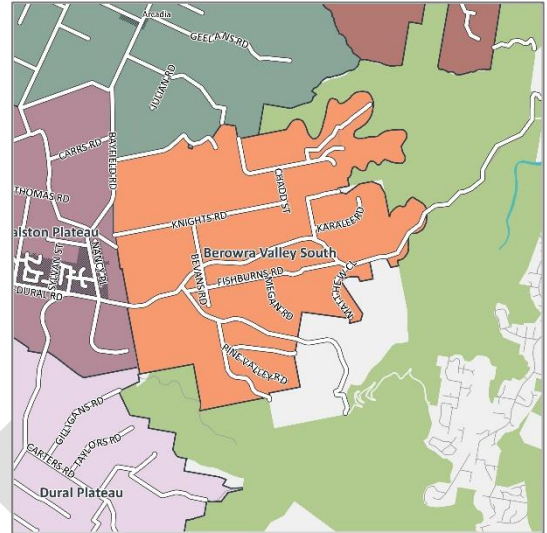


Source: SGS Economics and Planning, 2019.

9. BEROWRA VALLEY SOUTH

9.1 Description

The Berowra Valley South landscape area is one of gently rolling hills and lush vegetation. The precinct borders the Berowra Valley National Park, and several creek corridors (George Hall, Still, Charltons, and Berowra Creeks) traverse the area, lined with remnant native vegetation. A feature of this area are narrow, local roads (such as Fishburns Road) which are framed with dense vegetation, creating long green viewing corridors which suddenly open out to paddocks and farmland beyond. Dwellings in this area are well established, and house paddocks often feature significant fences, and planted gardens with very tall native and exotic trees. Shelterbelt plantings along fencelines are also a common feature of this landscape area.



Galston Road is a key corridor along which this iconic landscape area can be experienced. Galston Road, which traverses the Berowra River and valley and Galston Gorge, affords magnificent views back over this landscape area and showcases the sandstone escarpments of the Pittwater bioregion. Travelling through this landscape character area offers an experience from the Cumberland (lower, rolling hills and wide valleys) to Pittwater (exposed sandstone valleys) bioregions, where the landform slopes from higher, shallow valleys around Galston to the Berowra River Valley and Galston Gorge. Many viewing corridors along Bay Road and smaller local roads are enclosed with dense vegetation, with glimpses to very established, large rural houses that have a feel of country manors. In some locations, roads terminate at the edge of the Berowra Valley National Park, revealing lush dark greens and browns of native vegetation, in contrast to grassed and manicured gardens surrounding the large rural-residential properties. Some remnant nurseries and ornamental horticulture activities remain, however in this landscape area these are less common than elsewhere.

FIGURE 20: BEROWRA VALLEY



Source: Hornsby Shire Council.

Lot size and land use characteristics

Most lots across the Berowra Valley South landscape area have an area between 2-10 hectares, with a small number below 2 hectares. Most land is zoned for RU4 Primary Production Small lots, and land use data suggests land is being used for rural residential, with some farm infrastructure and patches of seasonal horticulture, especially ornamental plants such as magnolias.

Compared to landscape areas further north, there is a greater intensity of what appears to be hobby farming here. Across the landscape area, there are several home businesses and various agricultural uses, including covered agriculture, broiler farms, horse studs, stables and equestrian centre, game bird farming, orchids, and alpacas.

TABLE 8: SNAPSHOT OF LOT SIZES AND CHARACTERISTICS

Landscape area	Median lot size	Average dwelling size	Landscape area in E3 (%)	Average lot area in E3 (%)
Berowra Valley South	2.03 hectares	250 sqm	21%	17%

Source: SGS Economics and Planning, 2019.

FIGURE 21: BEROWRA VALLEY SOUTH





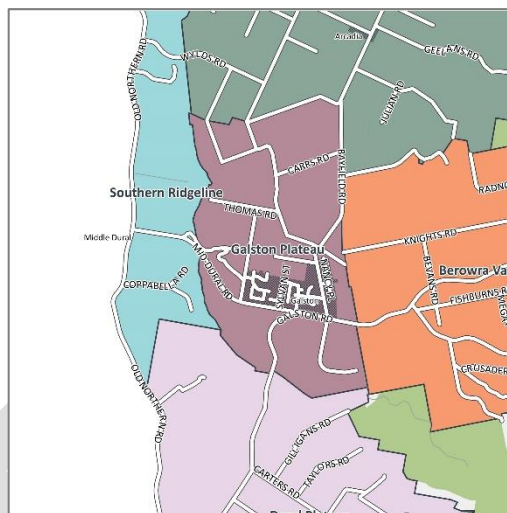
Source: SGS Economics and Planning, 2019.

DRAFT

10. GALSTON PLATEAU

10.1 Description

The Hills and Ridges landscape area is defined by the Cumberland bioregion, which is defined by low, rolling hills and valleys, supporting narrow-leaved scribbly gum woodland and turpentine forests. Due to the extent of agricultural activity and land clearing, little remnant vegetation remains although it is often visible along roadside corridors. In and around Galston, there is a sense of being at a high point, with wide skies framed by vegetation (both native and exotic species). Travelling through the landscape gives a sense of the gently, rolling topography. This landscape area contains the rural town of Galston, which acts as a local service centre for the surrounding rural area, as well as supporting a small local population in-town.



Galston’s immediate surrounds include several churches, and the well-known Fagan Park, a 55 hectare reserve and local tourist attraction which includes a bushland reserve and local walking track alongside botanic gardens. To the north of Galston’s town boundary is a reserve along School Road and Salloway Road noted for its significant remnant vegetation communities, with Rock Platform Heath and Turpentine-Ironbark Forest.

Lot size and land use characteristics

TABLE 9: SNAPSHOT OF LOT SIZES AND CHARACTERISTICS

Landscape area	Median lot size	Average dwelling size	Landscape area in E3 (%)	Average lot area in E3 (%)
Galston Plateau	2.02 hectares	270 sqm	9%	7%
Galston rural village	900 sqm	260 sqm	0%	0%

Source: SGS Economics and Planning, 2019.

Note: Areas shown for the broader landscape area exclude smaller lots within the rural village area.

FIGURE 22: GALSTON PLATEAU



Source: SGS Economics and Planning, 2019.

10.2 Rural villages within this landscape area

Galston

Galston is a larger rural town with residential development on Mid Dural Road and Galston Road. The town is located to the north of Mid Dural Road, and a strip of shops extends along Mid Dural Road. There are several population-serving shops for the residential and surrounding rural area, including an Aldi chain supermarket, post office, Galston public school, churches, a bank, newsagent, pharmacy and butcher. The town centres around Arcadia Road, Galston Road and Mid Dural Road, with residential development behind. It has a low-scale built form with single storey dwellings on large lots. The area maintains a rural feel through the presence of very tall, significant trees and densely-treed horizons.

FIGURE 23: GALSTON TOWN CENTRE, MID DURAL ROAD, AND SURROUNDING RESIDENTIAL AREA WITH VIEWS TO REMNANT VEGETATION



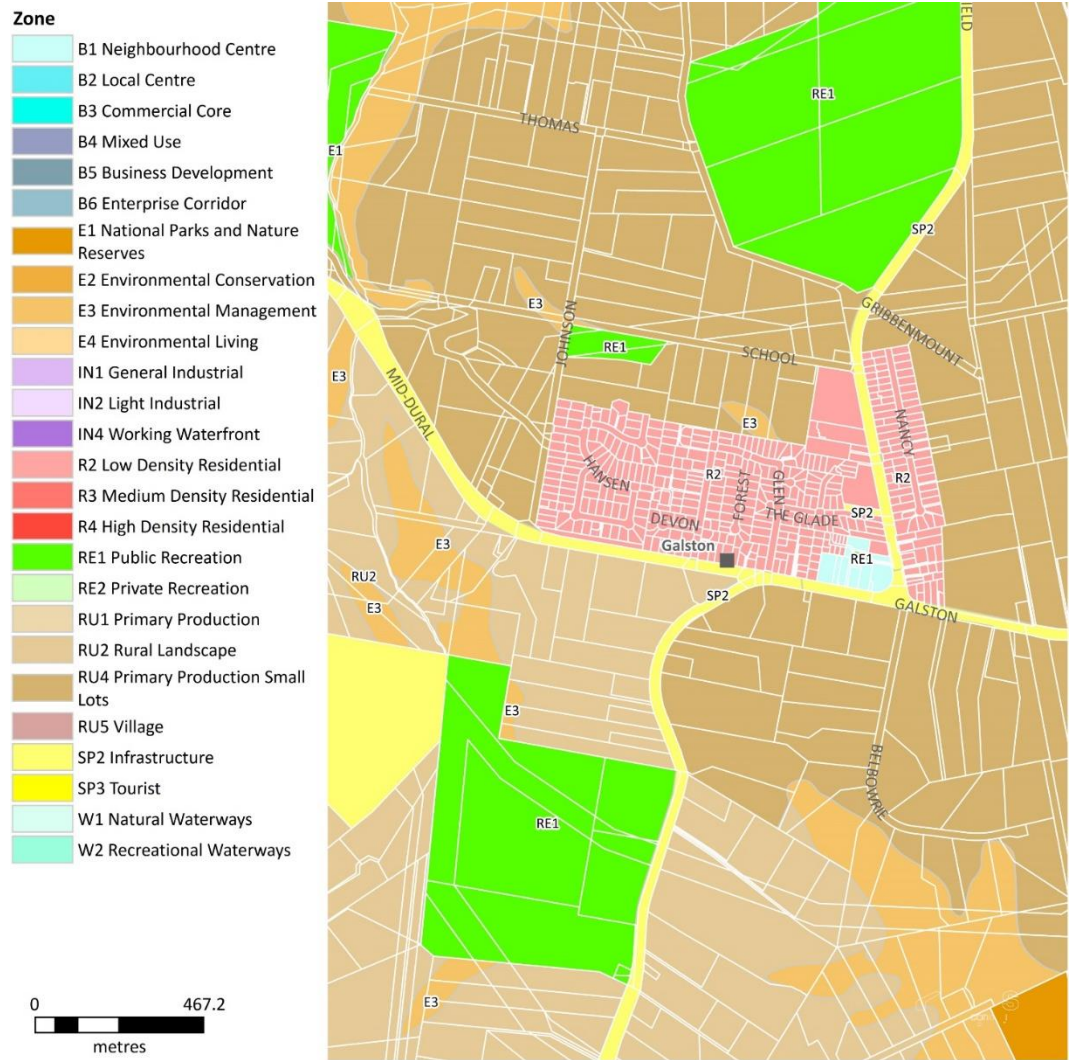
Source: SGS Economics and Planning, 2019.

Zoning and lot sizes around Galston rural village

Residential lots within the town have a median lot size of around 900 square metres; a quarter acre block. A relatively recent medium-density development, 'The Grove', is located on Mid Dural Road immediately adjacent to the town centre. Other residential development south of School Road and north of Mid Dural Road has a large-lot suburban appearance, influenced by the made roads (full kerb and channel) and grassy nature strips.

Land in the Galston rural village is zoned as low density residential, surrounded by RU4 Primary production small lots to the north and east of Galston Road, and east of Mid Dural Road. Several lots close to Galston have a land area between 1 and 2 hectares, while the residential lots within the town vary in size between 250 and 1,000 square metres.

FIGURE 24: ZONING AROUND GALSTON TOWN CENTRE



Source: SGS Economics and Planning, 2019.

11. NORTHERN RIDGELINE

11.1 Description

The Northern Ridgeline landscape area sits across two bioregions: Cumberland and Yengo. The southern part of this landscape area has lower, rolling hills with views over wide valleys from Old Northern Road. Travelling north, there is a sense of climbing the ridgeline, and spectacular views to the east offer a feeling of surveying river valleys to neighbouring ridgelines. The Glenorie rural town is in this landscape area and stretches along (predominantly the eastern side) Old Northern Road.

North of Glenorie, the landform shifts to the Yengo bioregion, where soils gradually become sandier especially further north of this landscape area. Here, the topography falls away more dramatically to the east, and long-ranging views over the Glenorie Creek Valley are glimpsed through corridors of native vegetation along the roadside. In this location the intensity of both farming and residential development is greatly reduced, and a transition to open farmland, alongside reaches of significant vegetation (in National Parks) can be felt.



Lot sizes and land use characteristics

Agricultural land use across this landscape area is a mixture of some cropping, with perennial and seasonal horticulture, and some intensive horticulture (including covered). There are several nurseries dotted across the landscape. At the same time, some non-agricultural land uses are occurring within the landscape area, such as churches, electricians, mechanics and other home businesses.

TABLE 10: SNAPSHOT OF LOT SIZES AND CHARACTERISTICS

Landscape area	Median lot size	Average dwelling size	Landscape area in E3 (%)	Average lot area in E3 (%)
Northern Ridgeline	2.03 hectares	330 sqm	16%	9%
Glenorie rural village	1,000 sqm	260 sqm	0%	0%

Source: SGS Economics and Planning, 2019.

Note: Areas shown for the broader landscape area exclude smaller lots within the rural village area.

FIGURE 25: NORTHERN RIDGELINE LANDSCAPE AREA, AND IMAGES OF GLENORIE RURAL TOWN



Source: SGS Economics and Planning, 2019.

11.2 Rural towns and villages within this landscape area

Glenorie

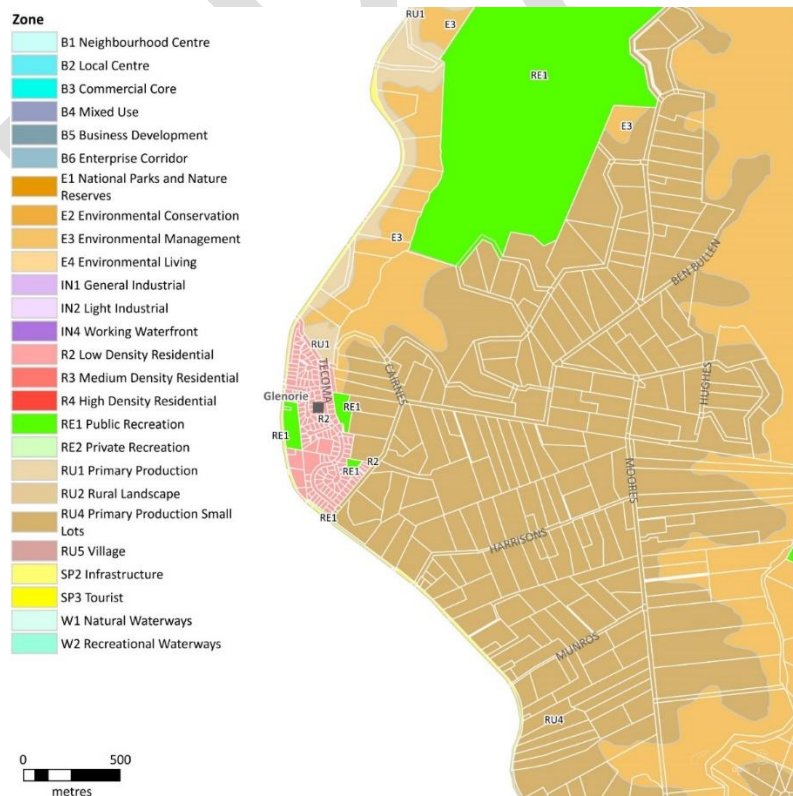
Glenorie is located on a ridgeline along Old Northern Road, and half of the town is located within the Hills Shire LGA. The rural town is arranged around Old Northern Road, with residential streets branching from the ridgeline down towards a nature reserve around Glenorie Creek, connecting to the Marramarra National Park. Remnant wet soil forests and well-vegetated horizons define parts of the residential area in Glenorie, which slopes down to a public recreation reserve on Tecoma Road.

Along Old Northern Road, commercial uses include a medical centre, supermarket, the famous Glenorie Bakery, a veterinary clinic, Glenorie Public School and Glenorie Community Centre. The town is the largest rural service centre heading north before Wisemans Ferry.

Most residential lots on the east of Old Northern Road have an area around 500 to 1,000 square metres, while some larger lots front the highway with an area around 1,000 to 2,500 square metres. A natural town boundary is formed between Old Northern Road and the Glenorie Creek river valley, where an Environmental Management Zone applies. Parts of Glenorie within the Hornsby LGA are zoned for residential (R2 Low Density Residential), and this residential area is clustered around Old Northern Road, and sits below a steeply rising hill and conservation area to the east.

Lots in the residential area range from 500 to 2,500 square metres and residential development is a mixture of large, one and two storey houses mostly constructed from brick, with tiled roofs. Owing to the kerb and channel, Glenorie's residential area has a more suburban feel than the surrounding rural area. However, very tall established trees both on residential lots and in the nearby rec reserve connect the streets back to their rural and bushland setting. There are very few front fences; front setbacks contained established exotic gardens sometimes with a mixture of eucalyptus (likely planted, not remnant vegetation).

FIGURE 26: ZONING AROUND GLENORIE TOWN CENTRE



Source: SGS Economics and Planning, 2019.

12. SOUTHERN RIDGELINE

12.1 Description

The Southern Ridgeline is defined by the Cumberland bioregion, which creates a landscape of low, rolling hills and wide valleys. In this location, land clearing has occurred with sparse vegetation along roadsides. This affords panoramic views from Old Northern Road and other highpoints, across valleys to the east and west of the landscape area. a feeling of big skies and expanse is a feature of this landscape area.

This landscape area is dotted with agricultural activity, as well as businesses which service the nearby urban populations, such as kennels/catteries. There is a diverse range of farming activities throughout the landscape area, including nurseries and ornamental horticulture, covered/intensive horticulture and some seasonal crops. Farmhouses are located close to roadsides and are often clearly visible when passing by due to the extent of vegetation clearing that has occurred across this landscape area. When travelling through this landscape area there is a sense of its connection to both peri-urban areas, as well as the broader agricultural lands to the north.

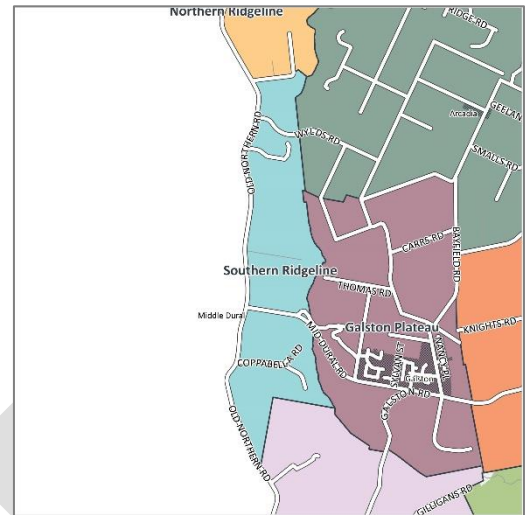


FIGURE 27: SOUTHERN RIDGELINE





Source: SGS Economics and Planning, 2019.

Lot size and land use characteristics

Much of the land in the Southern Ridgeline is zoned RU4 Primary Production (small lot) or RU2 Rural landscape. As observed above and shown in the table, only a small portion of the land is zoned E3 in this location: the Colah Creek corridor, to the east, where remnant vegetation is more intact.

TABLE 11: SNAPSHOT OF LOT SIZES AND CHARACTERISTICS

Landscape area	Median lot size	Average dwelling size	Landscape area in E3 (%)	Average lot area in E3 (%)
Southern Ridgeline	2.03 hectares	280 sqm	10%	13%

Source: SGS Economics and Planning, 2019.

12.2 Rural villages within this landscape area

Middle Dural

Middle Dural is a small rural village which services the immediate agricultural/rural residential area. The village is located at the intersection of Mid Dural Road and Old Northern Road, centred around Middle Dural Public School. Several rural industries front Old Northern Road in this location, some of which appear to be home businesses. Some very large houses front Old Northern Road.

13. DURAL PLATEAU

13.1 Description

The Dural Plateau landscape area encompasses diverse land use and settlement patterns. It is located within the Cumberland bioregion, defined by low, rolling hills and wide valleys which support Turpentine-Ironbark and Peppermint-Angophora forest vegetation communities. To the east, the underlying landform of the Dural Plateau transitions to the Pittwater bioregion, where exposed sandstone valleys and deeper, yellow earths can be found.

Several creeklines traverse the Dural Plateau, many of which are tributaries to the Berowra Creek in the east. When travelling across this landscape area from west to east, there is a sense of gently descending into forested valleys, then emerging into a productive and bustling hub between the urban, peri-urban and rural parts of Hornsby.

Viewing corridors along roads in this landscape area are enclosed with dense vegetation, with glimpses to very established, large rural houses that have a feel of country manors. In some locations, roads terminate at the edge of the Berowra Valley National Park, revealing lush dark greens and browns of native vegetation, in contrast to grassed and manicured gardens surrounding the large rural-residential properties. Some remnant nurseries and ornamental horticulture activities remain, however in this landscape area these are less common than elsewhere.

On main roads, there is a mixture of land uses including agricultural services, some industrial, and business parks closer to the Dural down centre. This population- and agriculture-serving commercial and industrial areas typically extend less than one block back from main roads (e.g. Old Northern Road or New Line Road).

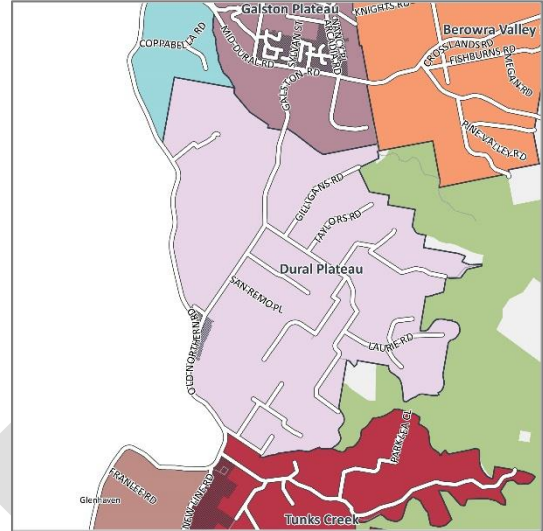


FIGURE 28: DEVELOPMENT AND LANDSCAPES ACROSS THE DURAL PLATEAU LANDSCAPE AREA





Source: SGS Economics and Planning, 2019.

Lot sizes and land use characteristics

This area is zoned for RU2 Rural Landscape, where the purpose of the zone is focussed on agricultural production, and protection of landscape character. However, based on current settlement and land use patterns, some transition away from horticultural activity towards rural residential and hobby farm uses has occurred. There is evidence of significant investment in the area, with very large houses, tall front fences and large exotic gardens.

The E3 Environmental Management Zone also partially covers some lots and many streets in this location terminate on the boundary of Berowra Valley National Park, where development is close to the roads which take winding paths and into gullies that eventually meet the Berowra Valley National Park.

TABLE 12: SNAPSHOT OF LOT SIZES AND CHARACTERISTICS

Landscape area	Median lot size	Average dwelling size	Landscape area in E3 (%)	Average lot area in E3 (%)
Dural Plateau	2.02 hectares	310 sqm	20%	18%
Dural	1,300 sqm	340 sqm	0%	3%

Source: SGS Economics and Planning, 2019.

Note: Areas shown for the broader landscape area exclude smaller lots within the town area.

13.2 Rural villages within this landscape area

Dural service centre and town centre

Dural is located on the peri-urban fringe of Cherrybrook. It is separated from Hornsby's urban areas by the Berowra Valley National Park and Berowra River valley, and driving through the town affords frequent views to long-range, treed horizons beyond the town. There is a sense of lush vegetation and rich soils throughout this area, which covers the Pennant Hills and Ridges landform type.

The town is spread out along Old Northern Road, with the main local town centre designated (using the B2 zone, Local Centre) at the intersection of New Line Road. In this part of Dural there are also industrially-zoned parcels, containing Bunnings, Autobarn and other large-format bulky goods and retail businesses servicing the surrounding residential and rural areas. Due to the town's dispersed layout, its character is intertwined with that of the surrounding Dural Plateau landscape area.

FIGURE 29: DURAL TOWN CENTRE, AND PRIMARY PRODUCE SALES NEAR DURAL TOWN CENTRE



Source: SGS Economics and Planning, 2019.

Zoning and lot sizes in the Dural rural village

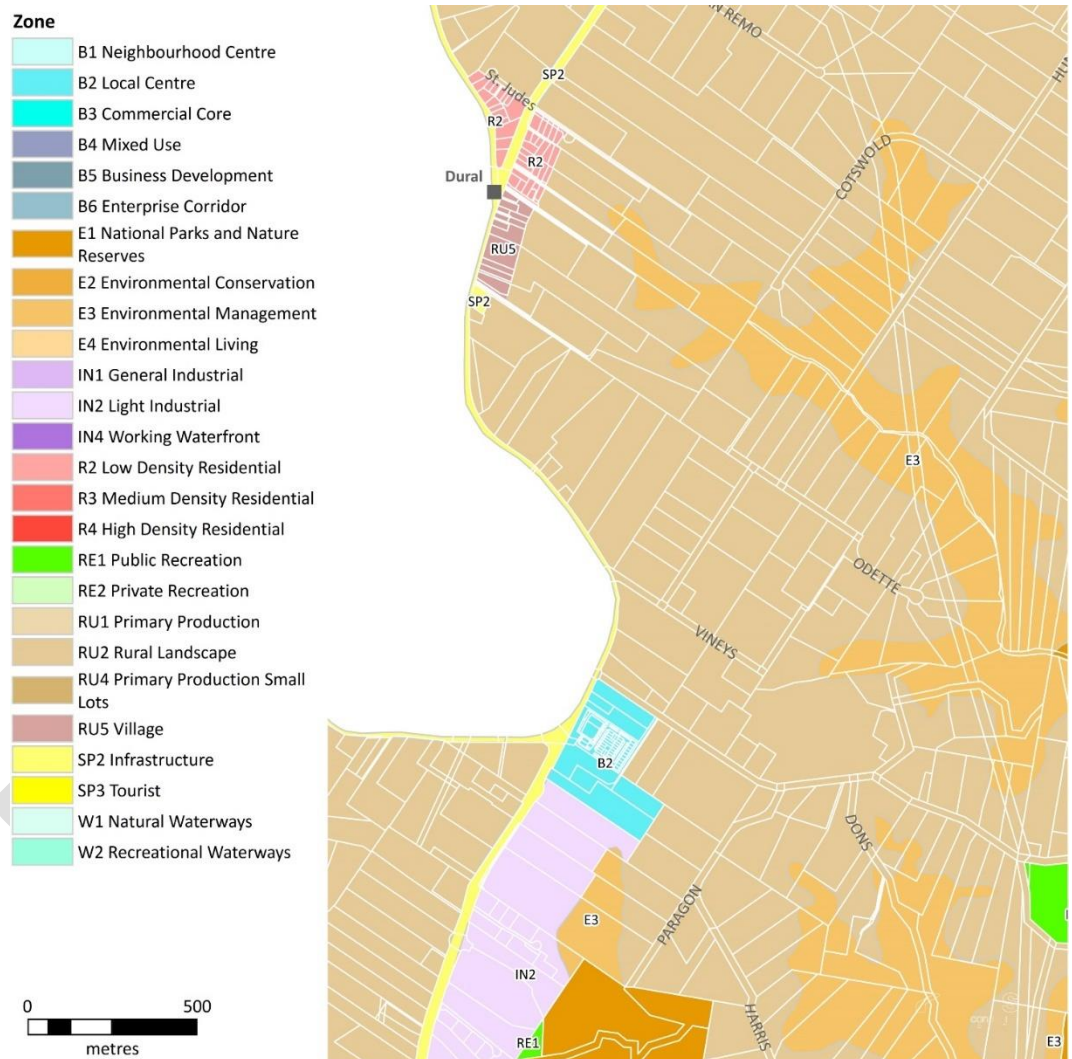
The Dural town centre has a mixture of lot sizes around 500 to 2,500 square metres. Those smaller lots are located within the R2 Low Density Residential, and RU5 Village Zones. South of Dural, there is also land zoned for B2 Local Centre, and IN2 Light Industrial. This area forms a business park and bulky goods retail/light industrial precinct on Old Northern Road, which services the surrounding rural and nearby residential areas. Council is currently preparing an Employment Land Use Strategy which examines the role and capacity of the business- and industrial-zoned land around South Dural.

Preliminary recommendations suggest additional employment land could be provided in this location. However, further investigation is required to reconcile findings of that Strategy with this Rural Lands Study and its recommendations.

The purpose of the RU5 Village zone is to encourage uses that are associated with rural villages, to service surrounding agricultural areas. Zone also identifies locations which should meet the housing needs of the community, which in some cases may be to enable people living in the surrounding farming areas to retire into town.

Land around Dural is located within the RU2 Rural Landscape Zone, where the primary purpose is to encourage and support the development of sustainable primary production, which maintains and enhances the natural resource base. In Hornsby, the zone also includes objectives about tourism and service provision to support surrounding areas. Recently, several applications for seniors living have been received in and around Dural and Glenhaven.

FIGURE 30: ZONING AROUND DURAL TOWN CENTRE



Source: SGS Economics and Planning, 2019.

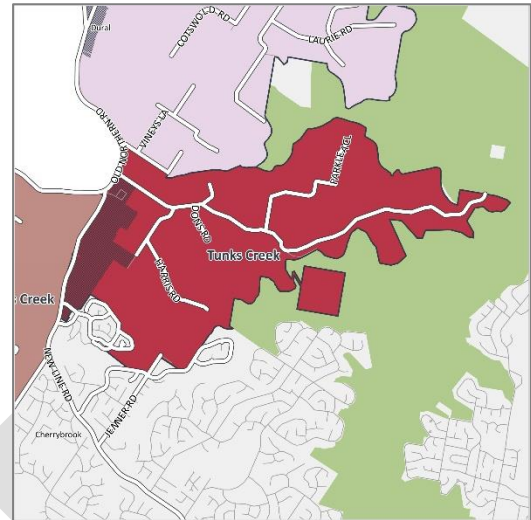
14. TUNKS CREEK

14.1 Description

The Tunks Creek landscape area is defined by the Pittwater subregion, which is a sandstone landscape with deep, yellow soils rocky outcrops and red- to brown clays. In this location, remnant native vegetation is tall, and the dominant vegetation communities are Peppermint-Angophora Forest and Scribbly Gum Open-woodland/Heath. When travelling through this landscape there is a variety of views that shift between ascent to enclosure, moving through river valleys towards ridgelines.

In some parts of the landscape area, views are enclosed with dense roadside vegetation, very tall trees and thick understoreys. Banksia and other flowering plants frequently occurring, particularly in remnant vegetation patches and on the fringe of the National Park (often encountered at the end of winding roads through large lot residential locations).

Across the Tunks Creek landscape area, there are many large rural houses that have a feel of country manors. Towards the east, roads terminate at the edge of the Berowra Valley National Park, revealing lush dark greens and browns of native vegetation, in contrast to grassed and manicured gardens surrounding the large rural-residential properties. Some remnant nurseries and ornamental horticulture activities remain, however in this landscape area these are less common than elsewhere.



Lot size and land use characteristics

The median lot size in Tunks Creek is around 2 hectares, and land is zoned RU2 Rural Landscape Zone. The purpose of the RU2 zone is to *encourage and support the development of sustainable primary production, which maintains and enhances the natural resource base*. In Hornsby, the zone also includes objectives about tourism and service provision to support surrounding areas. However, based on current settlement and land use patterns, it appears that there has been some transition away from horticultural activity towards rural residential and hobby farm uses. There is evidence of significant investment in the area, with very large houses, tall front fences and large exotic gardens.

TABLE 13: SNAPSHOT OF LOT SIZES AND CHARACTERISTICS

Landscape area	Median lot size	Average dwelling size	Landscape area in E3 (%)	Average lot area in E3 (%)
Tunks Creek	2.03 hectares	360 sqm	31%	22%
South Dural Industrial area	1.89 hectares	800 sqm	8%	1%

Source: SGS Economics and Planning, 2019.

Note: Areas shown for the broader landscape area exclude smaller lots within the South Dural Industrial area.

FIGURE 31: TUNKS CREEK LANDSCAPE AREA



Source: SGS Economics and Planning, 2019.

15. GEORGES CREEK

15.1 Description

The Georges Creek landscape area is defined by the Pittwater subregion, which is a sandstone landscape with deep, yellow soils rocky outcrops and red- to brown clays. In this location, remnant native vegetation is tall, and the dominant vegetation communities are Peppermint-Angophora Forest and Scribbly Gum Open-woodland/Heath. In the Georges Creek landscape area, there are also stands of Bloodwood-Scribbly Gum Woodland and Rock Platform Heath, particularly along corridors of roadside vegetation.



This landscape area is in the catchment of Georges Creek, a tributary to the Berowra Creek. The landform gently slopes down towards this waterway, where vegetation becomes denser and often frames views from nearby roads such as Wayfield and Hasting Roads. It is also bound by Old Northern Road, which creates a hard barrier between an urban residential area to the west, and this rural landscape type.

This landscape area shows pressure from nearby residential and urban uses. There is a large, established seniors' living development on Old Northern Road, adjacent to a nursery site (Anglican Retirement Village). Within the remaining rural landscape lots, most appear to be used for lifestyle purposes, suggesting rural activities have transitioned away from this location.

Lot size and land use characteristics

The median lot size across Georges Creek is 2.32 hectares and the land is zone RU2 Rural Landscape. However, as outlined above the current land use patterns appear to favour rural lifestyle/residential lots with little evidence of ongoing agricultural use, despite the purpose of the zone (primary production).

Despite these peri-urban pressures, rural lots across this landscape area have retained a rural character, through generous front setbacks, established garden planting reminiscent of "house paddocks" and preservation of native stands of vegetation akin to the more traditional rural areas north of this landscape type.

TABLE 14: SNAPSHOT OF LOT SIZES AND CHARACTERISTICS

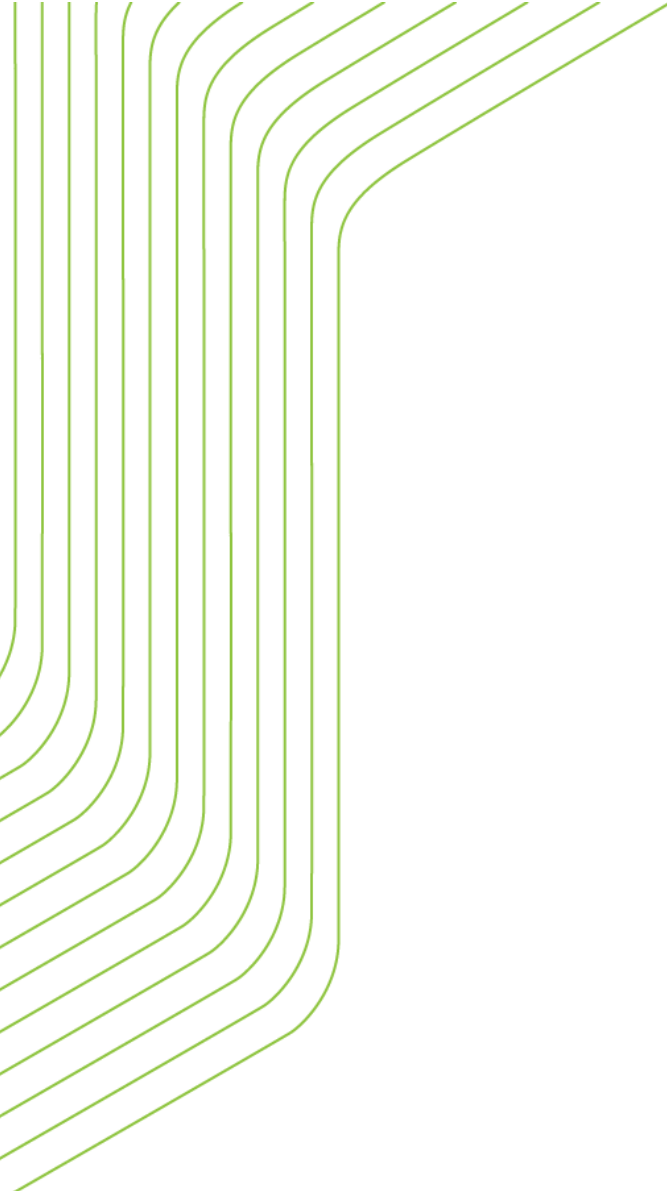
Landscape area	Median lot size	Average dwelling size	Landscape area in E3 (%)	Average lot area in E3 (%)
Georges Creek	2.32 hectares	280 sqm	7%	5%

Source: SGS Economics and Planning, 2019.

FIGURE 32: GEORGES CREEK LANDSCAPE AREA



Source: SGS Economics and Planning, 2019.



DRAFT



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