



# Hawkesbury City Council

## attachment 2 to item 178

### Update on Kurmond Kurrajong - Investigation Area Structure Plan

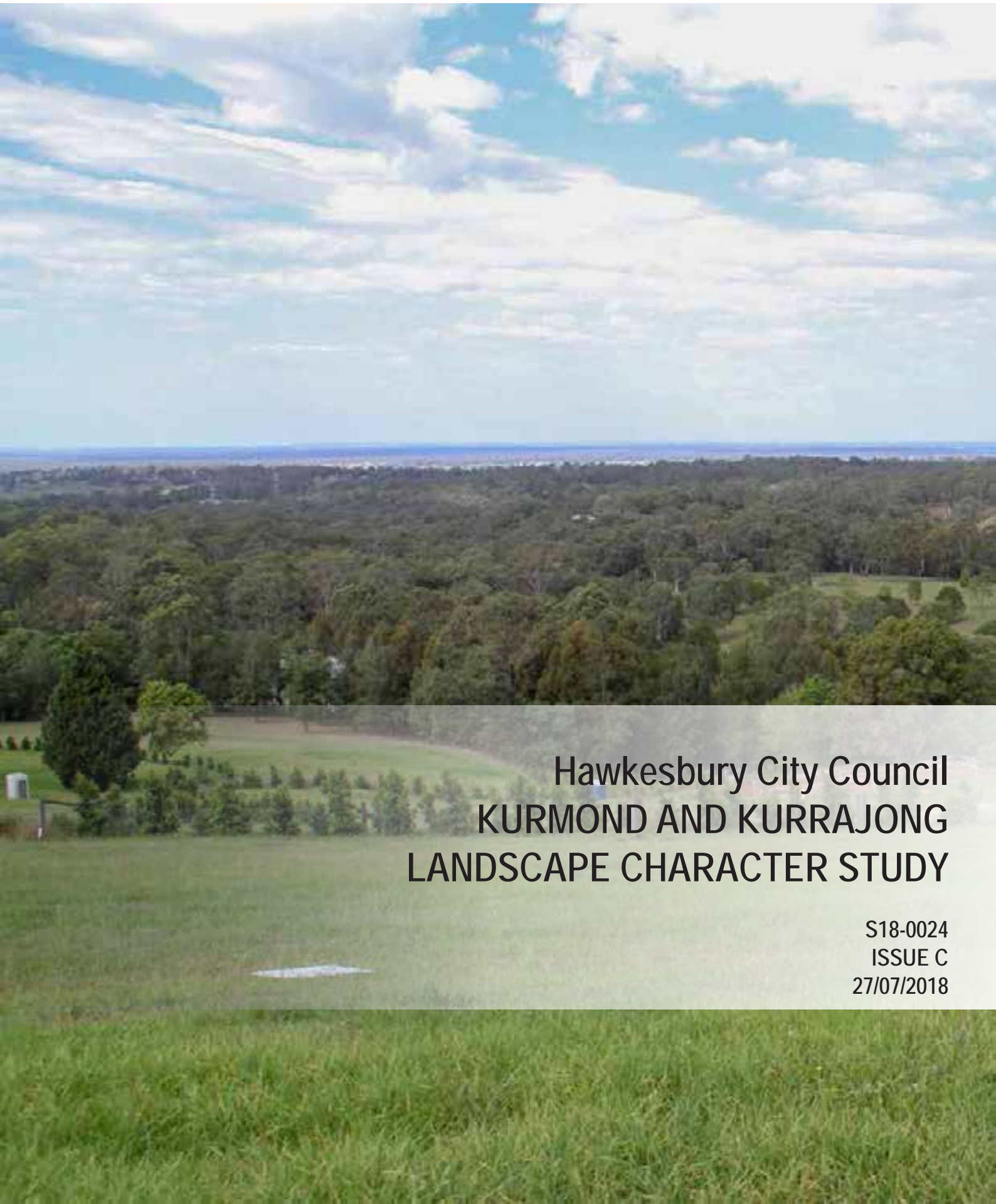
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**CLOUSTON** associates



Hawkesbury City Council  
**KURMOND AND KURRAJONG  
LANDSCAPE CHARACTER STUDY**

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Cover Image:  
Rolling Hills Landscape • Kurrajong

# KURMOND AND KURRAJONG LANDSCAPE CHARACTER STUDY



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## TABLE OF CONTENTS

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1.0 EXECUTIVE SUMMARY	7
2.0 INTRODUCTION AND BACKGROUND	9
BACKGROUND	9
PURPOSE OF THIS REPORT	9
METHODOLOGY	10
HISTORY	10
3.0 PLANNING CONTEXT	13
LOCAL CONTEXT	15
4.0 SITE DESCRIPTION	19
CONTEXT	19
TOPOGRAPHY AND VEGETATION	21
HYDROLOGY	22
POPULATION	22
ROAD CONNECTIONS	22
COMPOSITE ANALYSIS	22
5.0 LANDSCAPE CHARACTER	25
1. RURAL VILLAGES	26
2. RIDGELINE STREETS	28
3. PASTORAL VALLEYS	30
3. REMNANT VEGETATION	32
VIEWS AND VISTAS	34
6.0 PLANNING AND DESIGN GUIDELINES	39
7.0 CONCLUSIONS AND RECOMMENDATIONS	45
8.0 NEXT STEPS	47
9.0 REFERENCES AND BIBLIOGRAPHY	49
10.0 APPENDIX	50
APPENDIX 1	50
APPENDIX 2	52
APPENDIX 3	54
APPENDIX 4	56
APPENDIX 5	58
APPENDIX 6	60



EXECUTIVE SUMMARY



Gently rolling hills • Kurrajong

## 1.0 EXECUTIVE SUMMARY

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The purpose of this study is to undertake a detailed assessment of landscape character of Kurmond and Kurrajong to inform amendments to planning guidelines and controls.

This study builds upon planning frameworks including the Hawkesbury Residential Land Strategy 2011, and work associated with Structure Planning - Kurmond and Kurrajong Investigation Area 2015.

The study identifies important aspects of existing landscape character that will inform the way the landscape is planned and managed in the future.

Four main landscape character types have been identified:

1. Rural Villages
2. Ridgeline Streets
3. Pastoral Valleys
4. Remnant Vegetation

Key views and vistas of the undulating landscape have been identified and described so that they can be retained and protected through future planning controls. Criteria and controls are needed to ensure that residential development reflects and retains Kurmond and Kurrajong's existing landscape character.

In particular the study finds that, while Council's Local Environment Plan provides clear objectives for rural development in the LGA, the allowance of lot sizes as low as 2,000m<sup>2</sup> in such locations would lead to a form of development at odds with the landscape character in such areas.

A suite of objectives and guidelines have been formulated to address the constraints and opportunities in the Kurmond and Kurrajong Investigation Area. These guidelines apply to the themes of access, land use, natural environment, cultural heritage, character and identity, amenity and safety, built form and layout, and infrastructure.

The proposed next steps arising from this study include:

- integrating findings on key views and vistas into planning controls
- consolidating rural zoning into one zone (potentially R5 Large Lot Residential)
- updating controls on rural lot sizes to a minimum 4,000m<sup>2</sup>
- urban design improvements to the public realm in the Kurmond and Kurrajong centres.

The study also concluded that this approach could be readily adopted for all rural areas in the LGA.





INTRODUCTION AND BACKGROUND

Kurrajong Village • Kurrajong

## 2.0 INTRODUCTION AND BACKGROUND

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### BACKGROUND

There has been a steady market demand to expand residential dwellings in the Kurmond Kurrajong area and as a result several planning proposals are in train that could challenge Hawkesbury City Council's aim to protect the scenic and environmental qualities of these localities.

Criteria and controls are needed to make sure new residential development reflects and retains Kurmond and Kurrajong's existing landscape character.

The Kurmond and Kurrajong Investigation Area has been determined by considering the land clustered around or on the periphery of villages and other matters such as slope,



Figure 1. Kurmond and Kurrajong Investigation Area

existing vegetation, existing road layout and accesses, and zone and property boundaries.

### PURPOSE OF THIS REPORT

This report is a landscape character study of Kurmond and Kurrajong. It provides a detailed assessment of the defining characteristics and sense of place in the Kurmond and Kurrajong Investigation Area. It determines what aspects of the streetscapes, landscapes and buildings are positively contributing to make the area identifiable and unique.

The study recommends strategies to preserve and enhance the landscape in the face of residential expansion. This study will inform a structure plan for Kurmond and Kurrajong that recommends appropriate locations, typical lots sizes and desired built form character for future development in the Investigation Area. It will inform the way that the landscape is planned and managed by government and the private sector.



### STUDY METHODOLOGY

The methodology used in this study combines desktop studies and in-field investigation. A review of aerial photography, historical information, topographical features, and various planning and strategy documents explores patterns and scale of landform, land cover and built development. Site visits were conducted to review, record and analyse the existing landscape typologies and the way the landscape is experienced in the Investigation Area. The study includes a combination of objective and subjective judgments supported by clear evidence and reasoned arguments.

### BRIEF HISTORY OF THE LOCALITY

The Upper Hawkesbury is a raised plateau area, linking to the great mountain barrier of the Blue Mountains Plateau. The rocks forming the plateau were deposited 200 million years ago as a sandy sediment. The Hawkesbury River curves through an area covered by deep river-silts and gravels deposited over millions of years.

The first inhabitants of the land in the Hawkesbury Shire were the Darug people. They were attracted to the land with its abundance of food sources focused around the river system – birds, fish, shell fish and some plants. The Aboriginal population along the Nepean-Hawkesbury system became scarce with the onset of European settlement due to disease and repeated clashes between Aborigines and the white settlers.

In 1794, former convicts established small farms on the alluvial soils along the Hawkesbury River. They saw the rich fertile soils as a way to prevent famine and starvation for the colony. The farms of the Hawkesbury-Nepean became a major source of grain, and ended the uncertainty of food supplies that characterised the early years of the colony.



Image 1. Citrus Orchards, Kurrajong. Source: Records Authority of NSW

The settlers soon discovered that the Hawkesbury was prone to repeated flooding at unpredictable intervals. The severity of the floods became legend, with harvests, homes and livestock at constant risk. The river also provided the vital link between the Hawkesbury region and Sydney.

Located at the base of the Blue Mountains, Kurrajong was often recorded as Kurry Jung and Curryjong and also Wheeny. Kurrajong is apparently the Aboriginal name for the popular shade tree which provides food for livestock.

Kurmond is a small village located between Kurrajong and North Richmond. Originally called Longleat apparently after a property located in the vicinity although the origins of the property are not known. The name Kurmond is apparently a blend of 'KURrajong' and 'RichMOND' and was in use by the 1920s.

Governor Lachlan Macquarie toured the district in 1810 and noted in his journal, 'We rode through fine open forest and hilly country for about five miles to the foot of Curry Jung Hill, which is very long and steep to ascend ... and from whence we had a very grand noble prospect of the low Green Hills.'

The route westward was blazed in 1823 by Archibald Bell from Richmond, guided by an Aboriginal woman. The Bells Line of Road was notoriously bad, especially in the upper reaches of the mountains. The Bells Line of Road was used by drovers and travellers so inns, accommodation and refreshments were located along the route.

In the late 19th Century, Kurrajong was noted as a small village with three churches, two small schools and three boarding establishments. Longleat Public School was established in 1920 and renamed Kurmond Public School in 1926.

Subdivision of farm land was offered in the 1880s – 1890s, small farmlets from 4-11 acres and a few larger ones. These farms of the Kurrajong district didn't appear to have much agricultural potential, and were described as poultry farms, orchard blocks and rural retreats. The pasture land of the slopes and uplands was of poor quality and the light sandy soils were not as fertile as the alluvial plains.

The main produce from the small farms was citrus, peas, beans and stone fruits. A small area was used for dairy farming, and there was also cultivation of 'Kurrajong Wool' or wattle bark, used by tanneries. A land use survey conducted in 1943 showed that a considerable area of land in the Kurrajong area remained in its virgin state or had reverted back to secondary-growth forest scrub.

A decline in profits from agriculture saw numerous farmhouses in Kurrajong advertising accommodation for guests. Numbers of visitors increased with the opening of the Kurrajong-Richmond rail link in 1926. More recently, significant population increases have occurred in Kurmond and Kurrajong with suburban subdivision taking place in each locality.

As may be seen from this brief history there is a strong rural and agricultural heritage in the area worthy of conservation into the future.

PLANNING CONTEXT



Acreage block nestled amongst bushland • Kurrajong

## 3.0 PLANNING CONTEXT

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### METROPOLITAN CONTEXT

Planning for future residential uses in the Hawkesbury Local Government Area (LGA) needs to consider how the LGA itself, and the wider district and region, is expected to grow and change over the next few decades.

This requires Council to work within the strategic planning direction set by the NSW Government and the Greater Sydney Commissions for:

- Greater Sydney in the Greater Sydney Region Plan – a metropolis of 3 Cities including the Western Parkland City
- The Western City District, of which the Hawkesbury is a part.

#### Greater Sydney Region Plan

The Greater Sydney Region Plan forecasts that between 2016 and 2036, the Western City District is expected to grow by 740,000 people in 2016 to 1.1 million people by 2036. This equates to a need for nearly 40,000 new homes in 2016-2021 alone, and nearly 185,000 new homes between 2016 and 2036. Of this, the Western City District Plan sets a five-year housing target for Hawkesbury LGA of 1,150 new homes between 2016 to 2021.

However, further work is required to understand the housing and economic impacts of the growing population, with Hawkesbury LGA expected to grow from around 67,000 people in 2016 to just over 85,000 people by 2036.

The Greater Sydney Region Plan also notes that flooding in the Hawkesbury-Nepean Valley is one of the most significant natural hazards in Greater Sydney. It states that if the 1867 flood – where the river level reached 19.7 metres at Windsor – were repeated today, 12,000 residential properties would be impacted, 90,000 people would need evacuation and damages would cost an estimated \$5 billion.

#### Western City District Plan

The Western City District Plan collectively classes Richmond and Windsor as a strategic centre, recognising its expanded role as a hub for retail and commercial services; major health facilities including the Notre Dame University medical teaching campus. The Plan also identifies a growing tourism opportunity, focused on colonial history, rural character, agriculture and environmental assets including the Greater Blue Mountains World Heritage area, the Hawkesbury River and the surrounding agricultural lands.

The Plan sets a baseline target of 12,000 jobs by 2036 (up from 10,300 in 2016) with a higher target of 16,500 jobs.

The existing aerospace and defence activities at RAAF Base Richmond is a hub of logistics support for the Australian Defence Force. Over 450 aerospace workers work within the precinct for the Royal Australian Air Force, United States Air Force, Northrop, Airbus Group Australia Pacific, Lockheed Martin, Standard Aero, GE Aviation, L3 Aviation Products and CAE.



Combined, the RAAF Base, Western Sydney University Hawkesbury campus, TAFE NSW Richmond, and a new STEM ( Science, Technology, Engineering and mathematics) Secondary School will complement business activities around the Badgerys Creek Aerotropolis that will be focused on the planned Western Sydney Airport.

#### **North West Growth Area**

Part of Hawkesbury LGA is within the North West Growth Area, an area designated by the NSW Government as suitable for large scale greenfield land releases. In the case of Hawkesbury, the release areas are also located within a relatively short distance of the Richmond rail line.

#### **Western Sydney City Deal**

Hawkesbury City Council is involved in the Western Sydney City Deal, a 20-year agreement between the Australian and NSW governments and Blue Mountains, Camden, Campbelltown, Fairfield, Hawkesbury, Liverpool, Penrith and Wollondilly councils that will optimise the opportunity of the new airport and focus on connectivity; jobs; skills and education; planning and housing; liveability and environment; and governance.

Western Sydney Airport will also create international and domestic tourism opportunities. This will have a positive influence on the Hawkesbury's visitor economy by better connecting visitors to the places like the Hawkesbury Regional Gallery, heritage areas including the Macquarie towns, visitor experiences such as the Hawkesbury Farm Gate Trails, and exceptional landscapes and waterways.

The Hawkesbury's unique landscape also offers rich soils for agricultural production that can in turn lead to export opportunities that will link to Badgerys Creek Airport. The Western Sydney University at Hawkesbury Campus and AgriPark Research Centre provide tertiary education in medical and forensic science, animal science, natural science, sustainable agriculture and food security with world-class research facilities in grasses, pastures, legumes, insects and ecology.

Hawkesbury LGA is, therefore, ready to face the future, which a rich and diverse economy and expected population growth that can be optimised to bring more opportunities and services to more people.

#### **Hawkesbury Housing and Employment Strategy**

In response to these issues and opportunities, Council needs to develop detailed housing and employment strategies .

In the case of housing, planning that focuses housing development in the right locations:

- Within the areas of the North West Growth Area located within Hawkesbury
- Near existing transport connections or centres
- Within easy access of future job locations
- Within existing urban areas with good access to existing services such as education, health and commercial services
- That minimise risks associated with flooding and bushfires.

In the case of employment, planning that focuses economic development in the right locations, that build on:

- The areas natural advantages, its rich soils and associated agricultural lands, its areas of natural beauty and wilderness
- Its strengths, the cluster of aerospace, education, research and employment activities between Windsor and Richmond
- Richmond and Windsor as a strategic centre, recognising its expanded role as a hub for retail and commercial services; major health facilities including the Notre Dame University medical teaching campus
- Growing tourism opportunities, focused on colonial history, rural character, agriculture and environmental assets including the Greater Blue Mountains World Heritage area, the Hawkesbury River and the surrounding agricultural lands.

## LOCAL CONTEXT

The following reports and actions are critical in understanding the current planning context within which this Landscape Character Study is placed.

These documents are a combination of either the strategic or the statutory intent of Council, whereby the Strategic is the setting of desired outcomes that are important to the local community and the Statutory is the provision of appropriate rules and regulation that form the decision making framework for individual development proposals.

It is critical that the strategic and the statutory continue to align properly in order to provide the best outcomes as development pressures continue across the Kurmond and Kurrajong Investigation Area.

Development outcomes should be consistent with the broader vision for the Council that is encapsulated by the strategic documents. In reality, the current planning context is in need of refocusing so that individual development decisions do not override the collective objectives and outcomes that give effect to the vision.

### **Hawkesbury Residential Land Strategy 2011**

This strategy aims to accommodate between 5000 – 6000 additional dwellings by 2031, primarily within existing urban areas, without enforcing a great burden upon rural areas or villages. In doing so, it seeks to preserve the unique and high quality natural environment of the Hawkesbury area, and maintain the viability of existing rural villages.

The future development of rural villages is recommended to be low density and large lot residential dwellings, which focus on proximity to villages and services and facilities. Impacts on agricultural land should be minimised, and scenic landscape and natural areas protected.



### **Hawkesbury Community Strategic Plan 2017 – 2036**

This is a broad based plan that provides a blue print for the more detailed planning to come. It relates to this study through its key direction relating to shaping the growth of the Hawkesbury area. It seeks to respond proactively to planning so that we achieve “a balance of agriculture, natural environment and housing that delivers viable rural production and maintains rural character”.



### **Structure Planning - Kurmond and Kurrajong Investigation Area 2015**

In July 2015, council adopted development principles and a local planning approach for the area identified as the Kurmond and Kurrajong Investigation Area. The development principles are derived from a detailed analysis of the major physical, infrastructure and servicing constraints of the land such as slope, vegetation, watercourses, roads, water and sewer. An output from this work was to include consideration of the following issues in any assessment of proposed development in the area:

- What land may be suitable for large lot residential / rural residential development.
- What land may need to be protected or conserved (e.g. land containing threatened species or endangered ecological communities, riparian areas, land with significant slope, significant view lines). The nature and location of future development (e.g. the type of residential development and minimum lot size requirements).
- Likely development yield and take up rate.
- The extent of rural village expansion and limits to growth.
- The nature and location supporting public infrastructure (e.g. roads, intersections, drainage infrastructure, community facilities, parks and recreation facilities).
- Mechanisms to fund and provide supporting public infrastructure



### **Place Score Community Insights Report 2018**

This document is based upon surveys and assessments of what local communities value in their town centres and local areas.

This report highlighted that people across the LGA had a high care factor for the natural environment, including views and vegetation. The overall visual character of the area was attributed a high value by all respondents.

Kurmond and Kurrajong villages were included in this report and the specific outcomes for these villages strongly reflect the overall desire of the LGA's residents.

### **Hawkesbury Local Environmental Plan 2012 (HLEP 2012)**

The Hawkesbury Local Environmental Plan 2012 is the primary local planning instrument. It sets the fundamental planning standards for development, including the critical matters of land zoning and minimum lot size for subdivision.

For the Kurmond Kurrajong Investigation Area this is a combination of the zones described as RU1 Primary Production and RU4 Primary Production Small Lots. These zones occupy the rural areas that surround the villages. The minimum lot size maps of the HLEP2012 identify predominately 4 hectares or 10 hectare minimums for new subdivision within these areas. The HLEP2012 also provides environmental layers such as water courses and biodiversity mapping that help to highlight significant and potentially sensitive natural features of the locality. Council must consider the provisions of the HLEP2012 when assessing and determining Development Applications.

#### **Various Planning Proposals to amend HLEP2012**

Since adoption of the HLEP2012, there has been growing pressure upon Council to amend certain key provisions that have acted to restrict development. These Planning Proposals have been primarily seeking to replace the larger minimum subdivision lot sizes currently prevailing in rural locales, with much smaller minimum lot sizes that are more aligned with rural residential or residential development. They have not sought to change the underlying zoning of the land, thus creating some potential conflict between a rural zone with a residential density.

There has been in excess of 20 Planning Proposals, a number of which have successfully proceeded through the process resulting in amendments to the HLEP2012. There are a number of outstanding proposals awaiting determination.

#### **Various Development Applications**

Arising from the various Planning Proposals that have changed the minimum lot size for subdivision but not changed the underlying zoning of the land, have been a series of Development Applications for subdivision. Applications are not meeting the current zone objectives but may still be approved. Individually, these development proposals exhibit consistency and compliance with the newly prescribed minimum lot sizes, but collectively could have significant impacts upon the values of the locality that are seen by the community as being intrinsic to its character.

Of particular concern to Council is the appearance of planning proposals for rural areas with lot sizes as small as 2,000m<sup>2</sup>. Lots of this size will fundamentally change the rural character of these locations.

Within the context of all of the above plans and actions, it is the objective of this study to provide some coherent and consistent guidance for the future of the Kurmond Kurrajong Investigation Area. Once key strategic outcomes are identified, it is critical that the statutory tools of Council, work in such a way as to allow development to be consistent with those outcomes.

#### **Economic Assessment**

An economic assessment of Kurmond and Kurrajong by Peter Leyshon indicates that further retail expansion does not appear warranted. There is a reasonable range of services in both centres and no evident retail vacancies. The ridge locations limit further expansion though both centres would benefit from public domain improvements.



SITE DESCRIPTION



View from Kurrajong out over residential properties • Kurrajong

## 4.0 SITE DESCRIPTION

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### CONTEXT

Situated amongst the rolling foothills of the Blue Mountains, Kurmond and Kurrajong villages are 60km north-west from Sydney's CBD, just over an hour's drive away.

The villages are within the Hawkesbury Highlands, located between Bilpin to the west and Richmond to the east. They are seen as a transition zone between the Hawkesbury river valley and the Blue Mountains World Heritage areas.

Kurmond is a small neighbourhood located on the ridgeline that follows Bells Line of Road as it winds down from the foothills of the Blue Mountains to the Nepean River and floodplains of Richmond. Kurmond is focused around a small strip of shops on the south western intersection of Inverary Drive and Kurmond Road.

Kurrajong is a larger and more vibrant neighbourhood focused around the narrow, meandering carriageway of Old Bells Line of Road as it follows the ridgeline. It has relatively intact heritage qualities and consists of predominantly single storey buildings.

The footprint of both villages is defined by the steep topography and they are primarily limited to the ridgeline.



Figure 2. Kurrajong and Kurmond context map



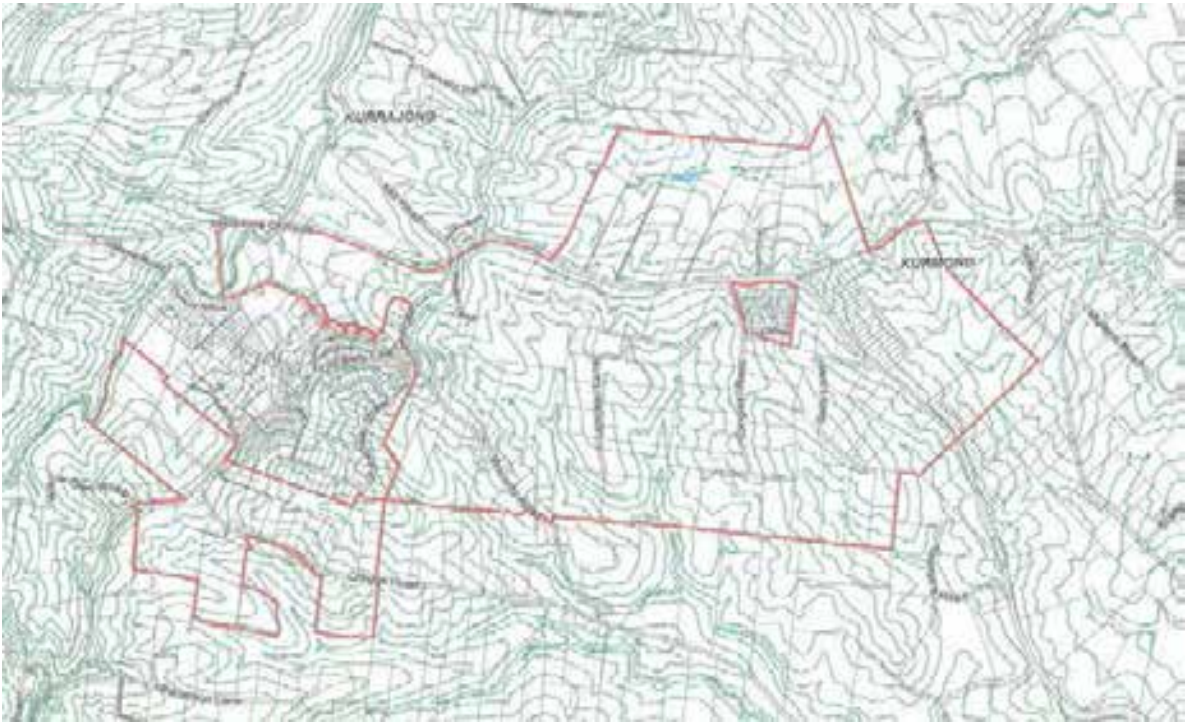


Figure 3. Investigation Area Topography Map

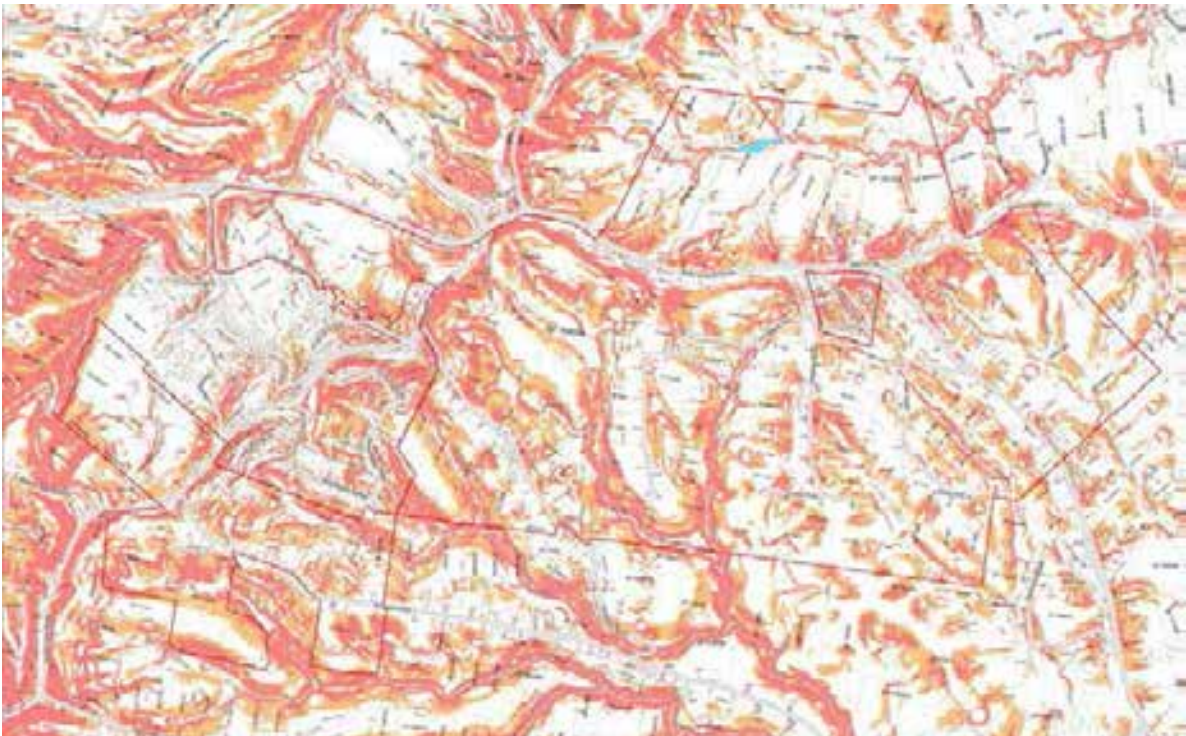


Figure 4. Slope greater than 15%

## TOPOGRAPHY AND VEGETATION

The elevated topography of the area provides spectacular far reaching views of the Blue Mountains, Sydney Basin, the river lands around Richmond and beyond. Considerable parts of the site have a slope greater than 15%.

Much of the land within the Investigation Area has been cleared of native trees, shrubs and groundcover, however significant stands and corridors of native vegetation do remain throughout the area. Areas with high biodiversity value tend to correlate with the riparian zones.

Vegetation communities that remain include Shale Sandstone Transition Forest, Sydney Turpentine Ironbark Forest, Shale Plains Woodland and Western Sydney Dry Rainforest. All of the land is classified as bushfire prone, with the vast majority of the area falling within the high hazard Category 1 vegetation class.

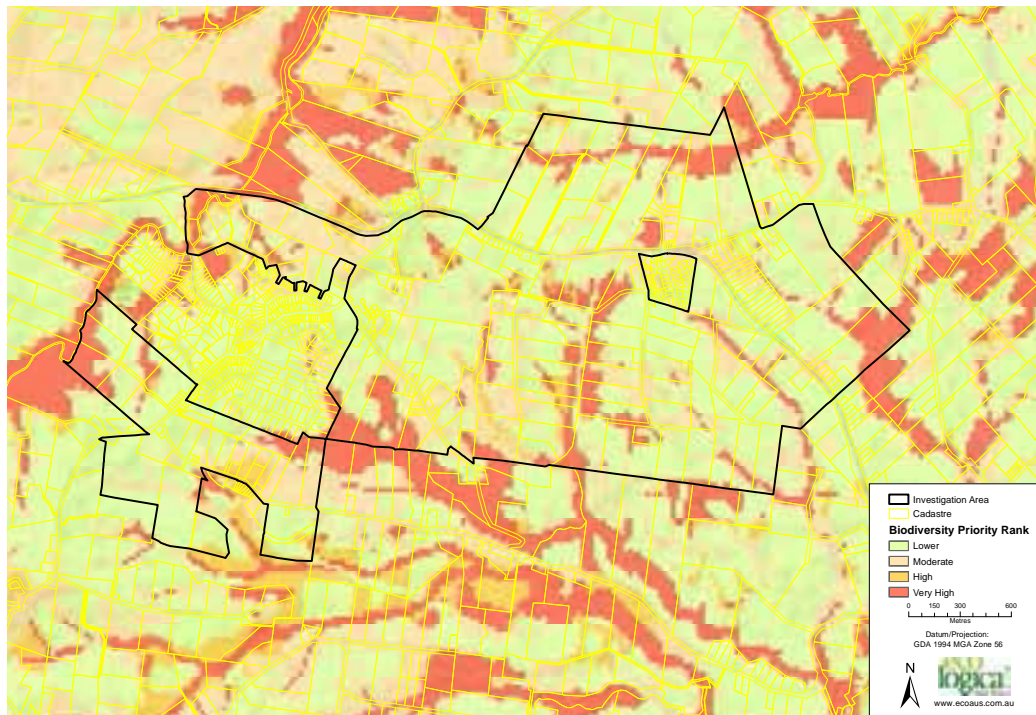


Figure 5. Biodiversity Map

## HYDROLOGY

The many watercourses of the investigation area flow into three catchment areas:

1. Land south of Bells Line of Road and east of Old Bells Line of Road/Grose Vale Road drains south-west into Redbank Creek, which flows into the Hawkesbury River
2. Land north-west of Old Bells Line of Road/Grose Vale Road drains to the north into Little Wheeny Creek, which flows into the Colo River
3. Land to the north of Bells Line of Road and east of Comleroy Road drains east into Howes Creek, which flows into the Hawkesbury River

A number of dams are located in the Kurmond Kurrajong Investigation Area, predominately west of the Kurrajong residential area. They are typically small and are located on or near watercourses.

## POPULATION

The populations of both Kurrajong and Kurmond are increasing as more people seek out the tranquillity and natural beauty of the area, with many more acreage properties being developed for hobby farms and rural getaways. The 2016 Census indicates the population of Kurrajong is 3,062 and Kurmond is 852.

The idyllic nature of the landscape has attracted many tourists over the years who come to experience the peaceful atmosphere, fresh air and natural surrounds. There are a variety of bed and breakfast establishments that benefit from the yearly influx of tourists. The villages and Kurrajong in particular have long been renowned for the fruit and citrus tree orchards that flourish in the local conditions.

## ROAD CONNECTIONS

The major east-west Bells Line of Road connects the two villages of Kurrajong and Kurmond to each other and the wider region. Kurmond is situated directly along the Bells Line of Road, which has significant volumes of traffic in peak hours.

Kurrajong sits nearby on the Old Bells Line of Road, a southerly regional loop road to Grose Vale and Grose Wold. The intersection between Bells Line of Road and Old Bells Line of Road is the only signalised intersection in the Kurmond Kurrajong Investigation Area.

Other major roads providing east-west connections are Kurmond Road and Greggs Road/Redbank Road. All other roads are minor local roads, approximately 20m wide with no kerb and gutter. The function and character of these roads is mainly a rural lane or cul-de-sac.

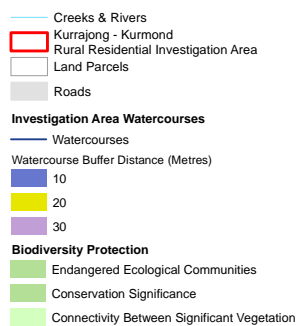
## COMPOSITE ANALYSIS

The map opposite shows a composite overlay of the various environmental values outlined earlier. It is noteworthy that the white areas - not constrained by these factors - are relatively limited. Furthermore, this analysis excludes landscape and view considerations addressed in the following sections.





Figure 6. Composite Analysis  
The areas in white are the least constrained by topography and vegetation



LANDSCAPE CHARACTER







Agricultural character and remnant bushland • Kurmond



## 5.0 LANDSCAPE CHARACTER

Four main landscape character types have been identified. The names reflect the dominant influences on landscape character.

Landscape character type	Description	Key characteristics
1. Rural villages 	Kurrajong is on a ridge line and has extensive views of the Richmond Lowlands. It is located on Grose Vale Road and has a small supermarket, newsagent, coffee shops and gift shops. Kurmond is a north-facing village on a ridge line with small shops. Small lot properties are situated around the village centres.	Local shops Street parking Street lights
2. Ridgeline streets 	The landscape character along the ridgeline is predominantly urban. Roads such as The Bells Line of Road, Old Bells Line of Road and Kurmond Road run along the ridgelines. Their elevated position provides views of the Richmond Lowlands and the Blue Mountains.	Urban development Main roads Rural roads District and regional views Blue Mountains backdrop
3. Pastoral valleys 	The rural character of the region is defined by the lightly sloping open pastures with scattered trees over gently sloping terrain. Significant areas of land have been cleared for grazing and agricultural uses. Properties are dotted amongst the hills and valleys of the landscape situated between groupings of trees.	Lightly sloping open pastures Rural land cleared for agriculture Rural properties Rural roads, no kerb & gutter Small dams near watercourses
4. Remnant vegetation 	Although much of the vegetation has been cleared, there are pockets of remnant bushland with some densely vegetated areas around the creek lines.	Remnant native bushland Vegetated creeklines Endangered ecological communities

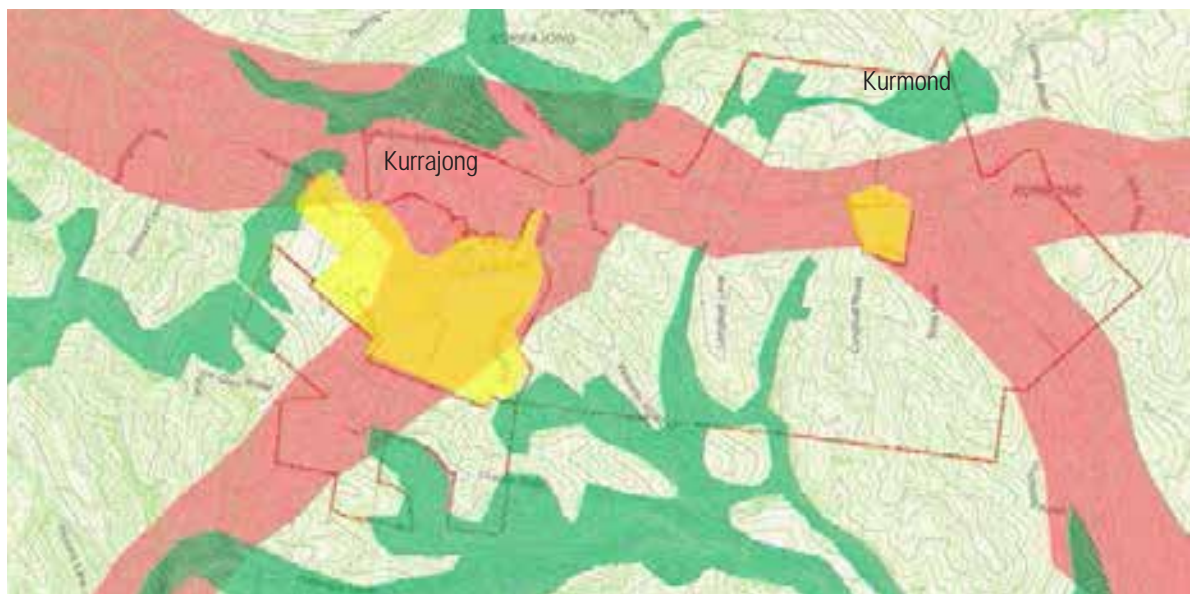


Figure 7. Landscape Character map



1. RURAL VILLAGES

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*Fresh fruit stall in Kurrajong Village. The Village has a relatively intact heritage fabric and possesses a pleasant human scale of predominately single storey buildings. The high street accommodates many local services and businesses and possesses a charming streetscape featuring many original 'cottage' buildings, acting as a tourism drawcard.*



*Village style shops and commercial buildings in Kurrajong. The shops are focused along the meandering Old Bells Line of Road as it follows the ridgeline. Views of the surrounding landscape can be had between buildings. A lane of parked cars on each side of the carriageway slows traffic flow and offers a barrier between pedestrians and traffic.*



*Small cluster of shops in Kurmond Village. As a local service area, the neighbourhood contains a public school, post office, petrol station, small convenience shops and restaurants. The centre is a popular local convenience shopping centre for daily needs but offers little appeal for shoppers to stop and chat.*



*Kurmond village shops along Bells Line of Road. The centre faces due north which could encourage the use of outdoor seating and socialising.*



2. RIDGELINE STREETS

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*Bells Line of Road coming into Kurrajong Village from the north. The landscape character of the ridgeline is predominantly urban. Views and vistas are sometimes glimpsed between buildings or along view corridors created by the street network.*



*New subdivision located along Bells Line of Road. Subdivision proposals with lot sizes as small as 2,000m<sup>2</sup> can create a barrier to near and distant views and vistas as residents seek to screen the curtilage of their properties with fences and planting to provide privacy from the carriageway. Natural elements in the landscape such as riparian corridors are also impacted.*



*Residential development set back from the ridgeline roads allows visual access to the Blue Mountains backdrop. There are panoramic views and vistas from the ridgeline across valleys, peaks and to distant ridges. Documenting and protecting such views for the public is important; in this instance this view will largely be lost through proposed residential subdivision.*



*Bells Line of Road running parallel to Kurmond Village Shops. While traffic slows at Kurmond, the experience at the heart of the shopping centre is car dominated and lacks pedestrian amenity.*



3. PASTORAL VALLEYS

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*Rolling hills landscape consisting of paddocks and stands of trees. The pastoral character contributes to the scenic qualities of the area by virtue of the lack of buildings. A current proposal for smaller lot sizes here would be likely to dramatically change this view.*



*Rural properties interspersed in the folds of the pastoral valleys. Controls on boundary hedge heights will ensure that public views to the surrounding landscape will not be lost.*



*An old barn sitting within the pastoral landscape shows the historic cultural landscape associated with European settlement of the area and frames distant views. Such older structures will inevitably disappear over time, but new buildings in such a context should respect this scale.*



*Timber fence lining residential rural road. The rural nature of fencing has a strong influence on the perception of the view beyond.*



3. REMNANT VEGETATION

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*The pastoral land is interspersed with significant remnant vegetation containing endangered ecological communities. The drifts of trees and vegetation create visual contrast between areas of cleared grassland, helping the viewers to 'read' and understand the landscape and connect with its rich heritage.*



*Filtered views through native vegetation. The remaining stands of vegetation and habitat are critically important - both visually and environmentally.*



*Old barn surrounded by native vegetation. The contrast between pastoral lands and areas of significant vegetation bring complexity, textural interest and visual appeal to the landscape.*



*Numerous streams and vegetated riparian areas feature in the landscape. They tend to have established vegetation cover and typically contain endangered ecological communities. They act as 'markers' in the landscape, indicating low lying or wet areas and in cases such as these offer exceptional scenic value to the landscape.*



VIEWS AND VISTAS

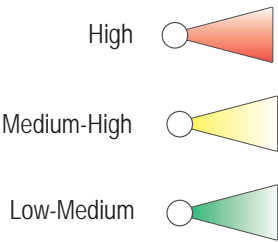
The elevated topography affords several significant views and vistas of the district and beyond. These landscape views are a significant feature of Kurmond and Kurrajong's landscape character.






If the view from the carriageway is blocked or the land within the view is permitted to change from a pastoral character then this unique landscape character and experience will be lost. Significant views need to be retained and protected by preventing any residential land uses within key views and vistas.

Key views and vistas of the undulating landscape are identified and described on the following pages.




Figure 8. Significant views and vistas



LOCATION	DISTANCE	BREADTH	DESCRIPTION	SIGNIFICANCE	IMPACT ON LAND USE PLANNING	IMAGE
A. Bells Line of Road near Redbank Road	Long distance views	Open views to north-east	Gently sloping pastoral landscapes	Medium	Retain and protect view	
B. Bells Line of Road near Yeomans Road	Long distance views	Open views to north-west	Dense vegetation in foreground with views to the Blue Mountains	High	Retain and protect view	
C. Near 332 Bells Line of Road	Long distance views	Open views to north-west	Frontage road with views to Blue Mountains	Medium-High	Retain and protect view	
D. Bells Line of Road near Inverary Drive	Long distance views	Open views to the north-west	Rural residential with views to Blue Mountains	High	Retain and protect view	
E. Near 396 Bells Line of Road	Long distance views	Open views to south-west	Pastoral landscape with views to Blue Mountains	High	Retain and protect view	
F. Bells Line of Road near Barrel 58	Medium distance views	Filtered views from north-east	Rural residential with views to rolling landscape	Medium	Retain and protect view	



LOCATION	DISTANCE	BREADTH	DESCRIPTION	SIGNIFICANCE	IMPACT ON LAND USE PLANNING	IMAGE
G. Bells Line of Road opposite Bells Lane	Medium distance views	Filtered views to the south-west	Rural residential with glimpses of Blue Mountains	Medium	Retain and protect view	
H. Near 436 Bells Line of Road	Medium distance views	Narrow view to north-east obscured by vegetation	Rural residential with views towards rolling landscape	Low	Retain and protect view	
I. Bells Line of Road opposite Kravings restaurant	Long distance views	Open views to the west	Pastoral landscape with views to Blue Mountains	High	Retain and protect view	
J. Near 560 Bells Line of Road	Medium distance views	Open views to north	Rural residential with views towards rolling landscape	Medium	Retain and protect view	
K. Near 615 Bells Line of Road	Long distance views	Open views to north east	Gently sloping valley and pastoral landscape	High	Retain and protect view	
L. Near 617 Bells Line of Road	Long distance views	Mostly open views to south-west	Rural residential with views to Blue Mountains behind	Medium	Retain and protect view	

LOCATION	DISTANCE	BREADTH	DESCRIPTION	SIGNIFICANCE	IMPACT ON LAND USE PLANNING	IMAGE
M. Near 13 Old Bells Line of Road	Long distance views	Partially filtered view to south	Vegetation with views to Blue Mountains	High	Retain and protect view	
N. Old Bells Line of Road near Kurrajong Veterinary	Long distance views	Open views to the west	Pastoral landscape with views to Blue Mountains	High	Retain and protect view	
O. Near 688 Bells Line of Road	Long distance views	Filtered views to north-west	Scattered trees within pastoral landscape with minor views to Blue Mountains	Medium	Retain and protect view	
P. Grose Vale Road near Buckett Place	Long distance views	Mostly open views to west	Residential frontages with views to gently rolling landscape behind	Medium-High	Retain and protect view	
Q. Greggs Road near Grose Vale Road	Long distance views	Open views to the south-west	Rural landscape in the foreground with Blue Mountains backdrop	Medium-High	Retain and protect view	
R. Kurmond Road near Bells Line of Road	Long distance views	Mostly open views to the south	Rural properties in the foreground and views over the Richmond lowlands in the distance	Medium-High	Retain and protect view	

PLANNING AND DESIGN GUIDELINES



Kurmond Village • Kurmond

## 6.0 PLANNING AND DESIGN GUIDELINES

Following on from the previous analysis, a suite of objectives and guidelines have been formulated to address the constraints and opportunities highlighted earlier in the report.

The table below summarises these guidelines across a suite of topics related to the public and private realm. The guidelines identify the core objectives, the recommended approach and the geographic or generic application of the guideline.

Theme	Objective	Guideline	Application
Access			
Public Transport	Encourage bus use between neighbourhoods and major transit nodes (Richmond/Windsor).	<ul style="list-style-type: none"> <li>Weather sheltered/well-lit bus stops (&lt;400m walk)</li> <li>Access to real time travel information</li> <li><b>Peak services to reflect realistic demand/requirements of residents.</b></li> </ul>	<ul style="list-style-type: none"> <li>Kurrajong and Kurmond Neighbourhood centres and major roads through Investigation Area.</li> </ul>
Private Vehicle (incl parking)	Coordinate approach to traffic flow and management to streamline roadways/ infrastructure.	<ul style="list-style-type: none"> <li>Avoid multiple, isolated intersections, particularly from new development directly onto main roads</li> <li>Keep parking clear of all documented district or regional views.</li> </ul>	<ul style="list-style-type: none"> <li>Roads and on road parking in proposed developments</li> <li>Main road upgrades (eg Bells Line of Road).</li> </ul>
Cycling and Walking	Promote walk/ cycle as means of accessing shops, bus routes and schools within neighbourhoods.	<ul style="list-style-type: none"> <li>Establish cycle lane/path between Kurrajong and Kurmond</li> <li>Create a safe and comfortable pedestrian environment within neighbourhood centres/villages, especially along ridges</li> <li>Focus on 800m walking catchment within villages.</li> </ul>	<ul style="list-style-type: none"> <li>Cycle infrastructure (bike lockers etc) at Kurrajong and Kurmond centres</li> <li>Dedicated cycle lane to follow ridge line road</li> <li>Walkability action plan within Kurmond and Kurrajong.</li> </ul>
Universal Access	Maximise universal access as far as natural gradients permit.	<ul style="list-style-type: none"> <li><b>Define, audit and update most walkable routes within neighbourhoods</b></li> <li>Ensure bus routes including community buses link valleys to ridgetops in villages to encourage walking within village and reduced car dependency for short trips.</li> </ul>	<ul style="list-style-type: none"> <li>Ridgeline streets in Kurmond and Kurrajong.</li> </ul>



Theme	Objective	Guideline	Application
Land Use			
Residential	Maintain clear distinction in residential types related to location and geography.	<ul style="list-style-type: none"> <li>• Focus principal residential population in and around compact neighbourhood centres</li> <li>• Prevent development and subdivision from sprawling and create a buffer between residential and active rural land uses</li> <li>• Ensure rural lot sizes maintain low density, optimise ecological corridors and open views.</li> <li>• Potential R5 Large Lot Residential Zone (4,000m<sup>2</sup>)</li> <li>• Use built form that responds to the steep terrain - a small footprint that steps down with the contours.</li> </ul>	<ul style="list-style-type: none"> <li>• Principal residential population in and around Kurmond and Kurrajong.</li> </ul>
Retail Commercial	<ul style="list-style-type: none"> <li>• Maintain clear distinction between retail/ commercial and rural land uses.</li> </ul>	<ul style="list-style-type: none"> <li>• Retail and commercial within neighbourhood cores.</li> <li>• Road front restaurants/hotels on main roads only</li> <li>• Encourage farm gate providers.</li> </ul>	<ul style="list-style-type: none"> <li>• Neighbourhood centres</li> <li>• Bells Line of Road</li> <li>• Farm gate properties.</li> </ul>
Transport	<ul style="list-style-type: none"> <li>• Promote ease of access and movement around neighbourhood centres.</li> </ul>	<ul style="list-style-type: none"> <li>• Slow vehicle travel speeds, clearly legible environments (signage, cues, wayfinding)</li> <li>• Integrated pedestrian/cycle/public transport information</li> <li>• Adequate car parking consolidated wherever possible in centres to avoid continuous line of cars on streets</li> <li>• Simple pull-offs on main roads near major views.</li> </ul>	<ul style="list-style-type: none"> <li>• On/off street parking in neighbourhood centres</li> <li>• Formalised pull-offs on Bells Line of Road near views.</li> </ul>
Public Domain	<ul style="list-style-type: none"> <li>• Promote safe, pleasant public domain <b>reflecting</b> neighbourhood status.</li> </ul>	<ul style="list-style-type: none"> <li>• Vegetation, shade, shelter, quality pedestrian surfaces, social seating, lighting in critical locations and interpretation</li> <li>• Formalised lookouts with wide district/ regional views</li> <li>• Avoid conflict between pedestrians, cycles and vehicles.</li> </ul>	<ul style="list-style-type: none"> <li>• Specifically in the village and Neighbourhood Centres</li> <li>• Social gathering space at Kurmond for locals shopping.</li> </ul>

Theme	Objective	Guideline	Application
Natural Environment			
Topography	<ul style="list-style-type: none"> <li>Ensure that the area's natural topography is conserved.</li> </ul>	<ul style="list-style-type: none"> <li>Controls on cut and fill in all built form including roads</li> <li>Maintenance of natural stream form.</li> </ul>	<ul style="list-style-type: none"> <li>Across the Investigation Area</li> </ul>
Hydrology	<ul style="list-style-type: none"> <li>Maintain and enhance the natural riparian systems of the area.</li> </ul>	<ul style="list-style-type: none"> <li>Follow riparian guidelines on stream types and riparian corridor controls (NSW Office of Water)</li> <li>Minimise/consolidate road crossings of creeks</li> <li>Restore minor creeks and chain of ponds as part of related development.</li> </ul>	<ul style="list-style-type: none"> <li>Across the Investigation Area.</li> </ul>
Vegetation	<ul style="list-style-type: none"> <li>Protect land identified as high and very high priority habitat (Ecological, 2018) from impact of residential development.</li> <li>Conserve and enhance natural habitat corridors.</li> </ul>	<ul style="list-style-type: none"> <li>Retain, protect and regenerate vegetation corridors identified in mapping</li> <li>Do not permit small lot (&lt;0.5ha) development of land identified as high, very high priority</li> <li>Include riparian corridor restoration (planting) in development obligations.</li> </ul>	<ul style="list-style-type: none"> <li>Any applicable land in Investigation Area.</li> </ul>
Bushfire	<ul style="list-style-type: none"> <li>Maintain bushfire protection.</li> </ul>	<ul style="list-style-type: none"> <li>APZ</li> <li>Suitable access including for fire fighting vehicles.</li> </ul>	<ul style="list-style-type: none"> <li>Across the Investigation Area</li> </ul>
Climate Change	<ul style="list-style-type: none"> <li>Mitigate temperature change.</li> </ul>	<ul style="list-style-type: none"> <li>Tree canopy cover</li> <li>Riparian corridor ecology.</li> </ul>	<ul style="list-style-type: none"> <li>Tree canopy especially on roads and in village centres.</li> </ul>
Cultural Heritage			
Physical Heritage	<ul style="list-style-type: none"> <li>Conserve heritage items (including trees).</li> </ul>	<ul style="list-style-type: none"> <li>Monitor condition of heritage items</li> <li>Consider extent of curtilage and integration of items.</li> </ul>	<ul style="list-style-type: none"> <li>Throughout the Investigation Area.</li> </ul>
Heritage Interpretation	<ul style="list-style-type: none"> <li>Make the story of the locality accessible and engaging.</li> </ul>	<ul style="list-style-type: none"> <li>Maintain views that assist in interpretation</li> <li>Promote heritage trails.</li> </ul>	<ul style="list-style-type: none"> <li>Throughout the Investigation Area.</li> </ul>

Theme	Objective	Guideline	Application
Character and Identity			
Urban Character	<ul style="list-style-type: none"> <li>Maintain and enhance compact character of existing villages and neighbourhoods.</li> </ul>	<ul style="list-style-type: none"> <li>Respect existing scale and form: 1-2 storey limit</li> <li>Retain existing subdivision pattern - avoid lot amalgamation.</li> <li>Low FSR per lot. Focus on high street as location for services rather than outside of neighbourhoods</li> <li>Ridge line profile and view corridors to inform decisions in relation to scale and form of buildings (eg extensions or granny flats).</li> </ul>	<ul style="list-style-type: none"> <li>Kurrajong and Kurmond neighbourhood centres.</li> </ul>
Rural Character	<ul style="list-style-type: none"> <li>Retain and protect pastoral/rural character</li> <li>Maintain clear distinction between urban rural interfaces.</li> </ul>	<ul style="list-style-type: none"> <li>Prevent rezoning of critical land parcels that provide significant view corridors</li> <li>Permit rezoning and subdivision of land deemed appropriate/lower order in terms of views. Prevent creation of small lot sizes</li> <li>Control on road signage and promotions.</li> </ul>	<ul style="list-style-type: none"> <li>Lands within Investigation Area.</li> </ul>
Views and Vistas	<ul style="list-style-type: none"> <li>Conserve 'pastoral' views, particularly from ridge line major roads</li> <li>Protect regional vistas from neighbourhoods.</li> </ul>	<ul style="list-style-type: none"> <li>Document and maintain key regional and district views (see maps)</li> <li>Interpret views at key locations</li> <li>Prevent loss of views from roads through controls on private boundary fences and hedges heights and designs.</li> </ul>	<ul style="list-style-type: none"> <li>Lands within Investigation Area.</li> </ul>
Amenity and Safety			
Microclimate	<ul style="list-style-type: none"> <li>Optimise sun in winter and shade in summer</li> <li>Maximise cooling breezes in summer</li> <li>Provide ample outdoor seating.</li> </ul>	<ul style="list-style-type: none"> <li>Carefully considered application of evergreen and deciduous trees, with primary focus on native species</li> <li>Careful selection of non-invasive exotic species on streets in Centres.</li> </ul>	<ul style="list-style-type: none"> <li>Shade and sun (and seating) particularly important in Centres and on roadsides.</li> </ul>
Passive Surveillance	<ul style="list-style-type: none"> <li>Ensure a sense of personal safety for the public and residents.</li> </ul>	<ul style="list-style-type: none"> <li>Design with CPTED principles</li> </ul>	<ul style="list-style-type: none"> <li>Investigation Area.</li> </ul>



Theme	Objective	Guideline	Application
Built Form and Layout			
Urban (in town or village)	<ul style="list-style-type: none"> <li>Retain existing scale and form. Prevent urban sprawl into currently non-urban areas or areas with significant view/ vistas.</li> </ul>	<ul style="list-style-type: none"> <li>1-2 storeys. Consider impact of parapet and roof form on backdrop perspective. Protect existing incidental/occasional views (along streets, between buildings, pedestrian experience)</li> <li>Typical lot sizes (TBC)</li> <li>Maximum site coverage controls for built form and minimum landscape controls.</li> </ul>	<ul style="list-style-type: none"> <li>Kurmond and Kurrajong neighbourhood centres.</li> </ul>
Periphery (edge of town or village)	<ul style="list-style-type: none"> <li>Consolidate urban form around neighbourhoods.</li> </ul>	<ul style="list-style-type: none"> <li>Establish limit to neighbourhood fringe (exclusion zone/rural character zone)/ Focus commercial and retail within neighbourhoods. Large lot rural residential which does not interrupt views and vistas.</li> </ul>	<ul style="list-style-type: none"> <li>Consider visual impact of development proposals from carriageway and impact on views and vistas, including whilst travelling.</li> </ul>
Rural (out of town or village)	<ul style="list-style-type: none"> <li>Maintain significant sweeping pastoral views by avoiding development of critical view paths.</li> </ul>	<ul style="list-style-type: none"> <li>Land with supporting building on lot as dominant built form</li> <li>Consolidate built form footprint and access driveways (including outbuildings, pools, courts etc)</li> <li>(Not less than 4000m<sup>2</sup>) with prescribed building envelopes for all lots</li> <li>Maximum site coverage controls for built form and minimum landscape controls.</li> </ul>	<ul style="list-style-type: none"> <li>Rural zoned land within the Investigation Area.</li> </ul>
Infrastructure			
Power lines	<ul style="list-style-type: none"> <li>Minimise visual impacts of power lines.</li> </ul>	<ul style="list-style-type: none"> <li>Selection of vegetation species under power lines</li> <li>Direction of easement across topography and especially over ridge lines</li> <li>Level of co-operation with power suppliers.</li> </ul>	<ul style="list-style-type: none"> <li>Investigation Area.</li> </ul>
Transport	<ul style="list-style-type: none"> <li>Maximise opportunity to access transport and promote walking.</li> </ul>	<ul style="list-style-type: none"> <li>Bus routes maximise catchment</li> <li>Community buses link valleys to ridge lines in village centres.</li> </ul>	<ul style="list-style-type: none"> <li>Throughout but especially around village centres.</li> </ul>

RECOMMENDATIONS



Rural Landscape • Kurmond

## 7.0 CONCLUSIONS AND RECOMMENDATIONS

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### CONCLUSION

Based on the detailed evaluation of environmental and landscape constraints in the Kurmond and Kurrajong Investigation Area, in particular when integrated with landscape character assessment and scenic management, it is suggested that there are very limited opportunities for significant additional residential development that would not significantly alter the landscape character of the area. In particular, small lot sizes as low as 2,000m<sup>2</sup> are not considered appropriate for this area.

### APPROACH AND RECOMMENDATIONS

To address these issues the following chronology of actions are recommended.

#### Know what we have

- Document and publicise the area's environmental values, constraints and opportunities
- Document the area's landscape character
- Record and publicise the area's key views and vistas
- Document the most significant trees in the area

#### Conserve what we value

- Integrate conservation of critical elements into planning controls (views, habitat, trees, heritage items etc)
- Establish development controls that are foremost landscape-oriented
- Clearly define boundaries between rural areas and village centres

#### Focus our Objectives

- Align objectives, criteria and controls
- Be clear on the target audience - residents, business, tourists
- Ensure private interests serve public good eg views
- Ensure the approvals process adopts objectives as the priority

#### Enlist our stakeholders

- Invite community to document specific values eg favourite views
- Maintain contact with the Department of Planning & Environment on proposed planning control updates
- Liaise with RMS on roadside landscape management
- Ask developers to test controls before adoption



IMPLEMENTATION PRIORITIES



View from Kurrajong Village • Kurrajong

## 8.0 NEXT STEPS

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Based on this study it is suggested that the critical next steps to progress the study's recommendations would be as follows:

- Complete landscape character study and establish related controls (see appendix 6 for example controls)
- Pursue consolidation of rural zoning (potentially R5 Large Lot Residential)
- Update controls on rural lot sizes
- Engage stakeholders in urban design upgrade concepts for the two villages
- Establish relevance of outcomes to other rural areas of the council

Finally, it is suggested that the approach adopted in this study could be readily applied to all rural areas in the Hawkesbury LGA.





REFERENCES AND BIBLIOGRAPHY

Remnant Bushland • Kurrajong