

# Narrabri Rural Land Strategy



**NARRABRI SHIRE**  
DISCOVER THE POTENTIAL

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### **Acknowledgment of Country**

We acknowledge the Traditional Custodians of the land on which the Rural Land Strategy is located, and recognise the continuing connection to lands, waters, and communities of people of the Gamilaraay/Gamilaroi/Gomeri/Kamilaroi Nation. We pay respect to Elders past, present and emerging.

We recognise the Gamilaraay/Gamilaroi/Gomeri/Kamilaroi Nation continued connection to Country and that this connection can be seen through stories of place and cultural practices such as art, songs, dances, storytelling and caring for the natural and cultural landscape of the area.

### **Document Control**

<b>Issue</b>	<b>Revision</b>	<b>Date</b>	<b>Description</b>	<b>Resolution</b>
Final	-	November 2024	Adopted	Minute 233/2024



## Executive summary

The rural areas of Narrabri have long been a cornerstone of the Shire's heritage, community fabric, natural beauty, and economic structure. Presently, it supports a diverse range of activities in rural land including agriculture, mining, gas, research, tourism, rural housing, rural and extractive industries as well as possesses unique environmental and cultural assets with its national parks. Its strategic location on the convergence of two major arterial roads midway between Sydney and Brisbane provides great opportunities to support the economy significant opportunities for diversification and access to export markets.

It is vital for Narrabri to encourage investment and spearhead innovation to drive local economic development and variety, all the while preserving the integrity of the rural environment's pristine, ecological, and picturesque qualities.

A comprehensive and proactive approach is essential to uphold and preserve the significant role that agriculture and its affiliated sectors play in Narrabri over an extended period. The Strategy lays the groundwork for enduring strategic planning for the rural zones within the Narrabri Shire, aimed at sustaining the drive of agriculture while promoting inventive diversification and enhanced value creation.

The Strategy aligns with the vision for sustained and viable rural and agricultural land in the *Narrabri Local Strategic Planning Statement 2040* and aligns with the broader strategic directions and actions of the *Narrabri Growth Management Strategy*, *Narrabri Economic Development Strategy* and *New England North West Regional Plan*.

The Strategy has been structured around three themes each with a set of planning principles to further define how rural land will be guided and managed into the future. These include:

### Community and rural character

- Protect productive agricultural land
- Minimise land use conflicts
- Enhance opportunities for First Nations people

### Economy and transition

- Encourage diversification of rural economy
- Support transition to new technologies and research

### Environment and climate change

- Build greater resilience to climate change and natural hazards
- Protect and enhance biodiversity, landscape and heritage

Each planning principle translates into a range of objectives and recommended actions to ensure more sustainable use of rural land, support growth and innovation in the sector, and ensure less potential for conflict between land uses through better planning and management across all rural land.

Council is committed to the strategic planning and management of rural land, which encompasses enhancing local infrastructure, safeguarding environmental and historical rural assets, and invigorating the local economy. Through the Strategy, the Council will be empowered to foster investment and innovation, paving the way for opportunities that enhance local economic development and diversification.

The Strategy stands as a framework for land use planning and management within Narrabri's rural areas, providing guidance for policy-making decisions over the next two decades. The Strategy will be used by Narrabri Shire Council to help inform future planning decisions and local planning policy for rural lands. It will provide insight for possible revisions to *Narrabri Local Environmental Plan 2012* (Narrabri LEP 2012) and Narrabri Development Control Plans (Narrabri DCPs), including land use zoning and development controls in rural areas.

Part 1

Background and context



## 1. Introduction

### 1.1 Need for a rural land strategy

Agriculture plays a key role in the social and economic fabric of Narrabri Shire. Narrabri Shire Council's (Council) vision for the Shire is one of a prosperous region built on a strong agricultural base between its townships and surrounding hinterland.

Narrabri's unique mix of rural land uses includes agriculture, mining, gas, rural industries, research, tourism, rural living, forestry, environmental management and nature parks, as well as having unique environmental and cultural assets.

Its strategic location on the convergence of two major arterial Roads, the Newell and Kamilaroi Highways, midway between Sydney and Brisbane. Alongside road infrastructure, the existing Walgett Railway line and the new Inland Rail offers Narrabri's rural economy significant opportunities for diversification and access to export markets.

It is important for Narrabri to facilitate investment and innovation, and open opportunities for local economic growth and diversification, while protecting the natural, ecological, and scenic quality of the rural environment.

An integrated and forward-thinking strategy is required to support and protect the important contribution agriculture and related industries make to Narrabri in the long term. The Narrabri Rural Land Strategy provides the basis for a long-term strategic direction for rural areas across the Narrabri Shire that maintains agricultural productivity and supports innovation through diversification and value-add processes.

### 1.2 Purpose of the strategy

Narrabri Shire Council prepared and adopted the *Narrabri Local Strategic Planning Statement 2040* (Narrabri LSPS) in July 2016, which sets out the 20-year vision for land use in the local area. The Narrabri LSPS contains several Planning Priorities and related actions that relates to agriculture industries and rural land. A key action of the LSPS is to “*prepare a Rural Lands Study and review it ever four years to ensure that land use policies enable a productive agricultural sector*”.

The Strategy aligns with the vision for sustained and viable rural and agricultural land in the Narrabri LSPS and aligns with the broader strategic directions and actions of the Narrabri Growth Management Strategy, Narrabri Economic Development Strategy and New England North West Regional Plan.

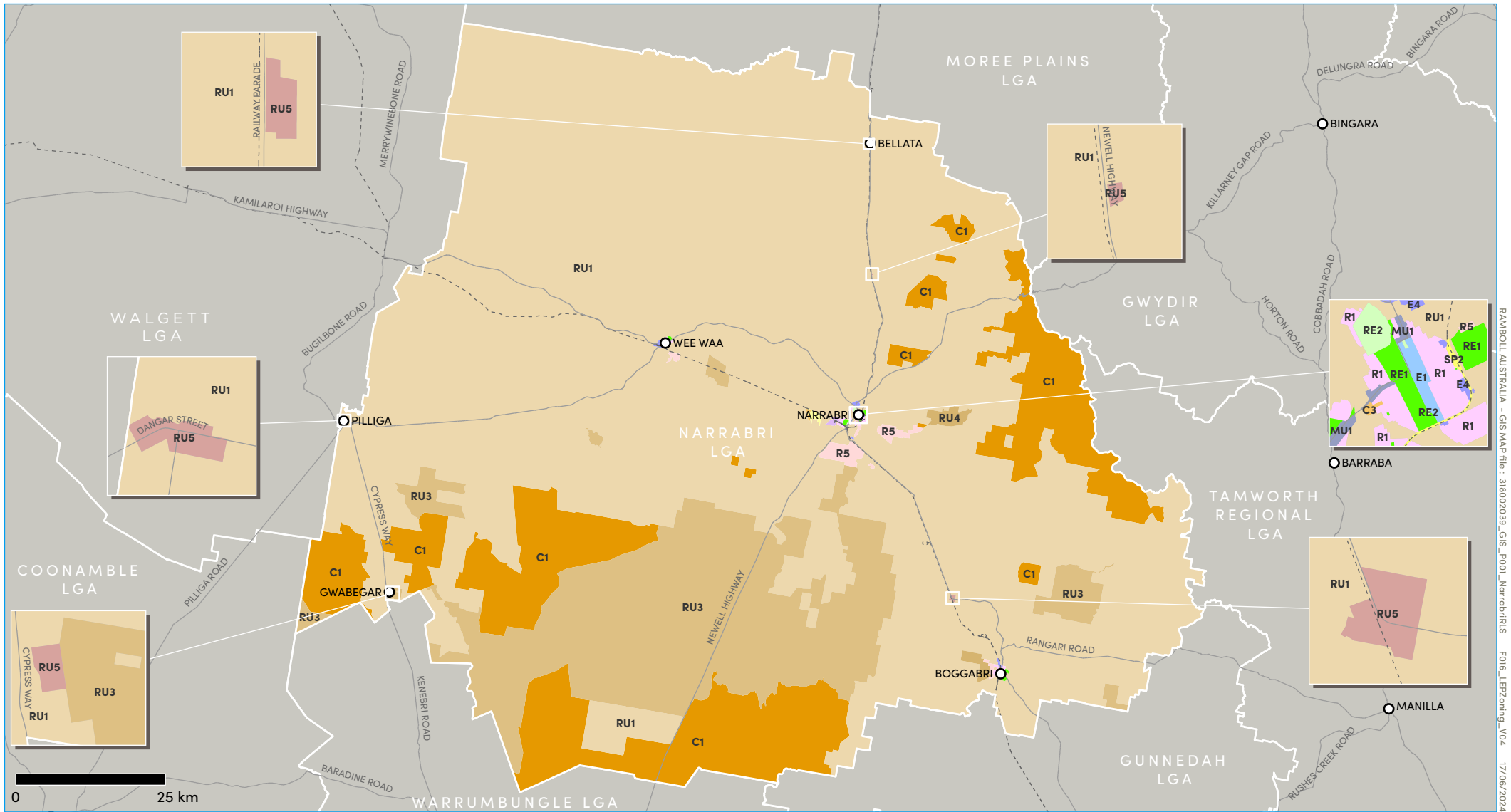
This Narrabri Shire Rural Land Strategy serves as a land use planning and management framework guiding decisions about rural land use in the Narrabri local government area over the next 20 years. The Strategy will be used by Narrabri Shire Council to help inform future planning decisions and local planning policy for rural lands. It informs potential updates to *Narrabri Local Environmental Plan 2012* (Narrabri LEP 2012) and Narrabri Development Control Plans (Narrabri DCPs), including land use zoning and development controls in rural areas.

### 1.3 Where does the Strategy apply?

The Strategy covers land zoned under the Narrabri LEP 2012 as follows (Figure 1):

- RU1 Primary Production
- RU3 Forestry
- RU4 Primary Production Small Lots
- RU5 Village
- C1 National Parks and Nature Reserve
- C3 Environmental Management.





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**Legend**

- |  |   |   |   |  |
|--|---|---|---|--|
| <ul style="list-style-type: none"> <li>— LGA boundary</li> </ul> | <p><b>LEP zoning (DPHI)</b></p> <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #e69a00; border: 1px solid black;"></span> C1 - National Parks and Nature Reserves</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #f4a460; border: 1px solid black;"></span> C3 - Environmental Management</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #f0e68c; border: 1px solid black;"></span> RU1 - Primary Production</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #d4b88c; border: 1px solid black;"></span> RU3 - Forestry</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #c49a60; border: 1px solid black;"></span> RU4 - Primary Production Small Lots</li> </ul> | <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #c44e52; border: 1px solid black;"></span> RU5 - Village</li> </ul> <p><b>Other zones</b></p> <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #66b3ff; border: 1px solid black;"></span> E1 - Local Centre</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #6666ff; border: 1px solid black;"></span> E4 - General Industrial</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #9966ff; border: 1px solid black;"></span> IN1 - General Industrial</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #666699; border: 1px solid black;"></span> MU1 - Mixed Use</li> </ul> | <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #ff99ff; border: 1px solid black;"></span> R1 - General Residential</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #ff9999; border: 1px solid black;"></span> R5 - Large Lot Residential</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #99ff99; border: 1px solid black;"></span> RE1 - Public Recreation</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #99ffcc; border: 1px solid black;"></span> RE2 - Private Recreation</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #ffff99; border: 1px solid black;"></span> SP1 - Special Activities</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #ffff66; border: 1px solid black;"></span> SP2 - Infrastructure</li> </ul> | <ul style="list-style-type: none"> <li>- - - - - Railway</li> <li>———— Road</li> </ul> |
|--|---|---|---|--|

**Figure 1: Narrabri LEP rural land use zones**

## 1.4 How was the strategy developed?

The Strategy was developed utilising different phases:

- Phase 1: Scoping Report
- Phase 2: Exhibition of Draft Rural Lands Strategy
- Phase 3: Final Rural Lands Strategy
- Phase 4 (future): Amendments to Narrabri LEP 2012 and Narrabri DCPs.

The Phase 1 Scoping Report provides an overview of rural and environmental land and relevant policies, strategies and studies as the basis for identifying challenges, opportunities and drivers influencing change on rural land. The Scoping Report was based on desktop research and review, including documents from Department of Planning, Housing and Infrastructure, Council, educational research, industry and related entities. The findings of the Scoping Report are incorporated into this Strategy.

During the development of this Strategy engagement with various stakeholders took place, including State agencies, various areas of Council and relevant stakeholders. The engagement was undertaken between April and June 2024 and included:

1. Meetings, both online and face to face, with the Department, Council and relevant stakeholders, including education institutions, internal State Government and Council staff, and industry.
2. Stakeholder in person meetings.

Further insights are intended to be obtained through public exhibition of the Strategy before being finalised for adoption.

## 1.5 Structure of this document

This Strategy is split into two parts:

### **Part 1 – Background and strategy context to the Strategy**

1. Introduction – Describes the background and purpose of the Strategy.
2. Strategic context – Gives a brief description of relevant planning policy context, provides an overview of the economic, social and environmental significance of the rural land in a regional and local context, and an overview of key drivers of change which inform the opportunities and constraints.

### **Part 2 – Way forward for Narrabri rural lands**

3. Vision –Statement describing the long term aspiration for Narrabri rural lands.
4. Planning principles – Defines planning principles and recommended actions in three focus areas underpinning the future of rural land in Narrabri.
5. Implementation – Key steps for implementing the recommended actions.



## 2. Strategic context

### 2.1 Planning and policy context

Agricultural policy is generally set by the NSW State Government Department of Primary Industries and Department of Planning, Housing and Infrastructure and influences land use planning and supports growth in agricultural production. The NSW planning system uses a tiered approach to planning for rural lands at the State, regional and local levels. This Strategy seeks to align with current strategic directions at the State and regional levels, to guide local actions for the benefit of the Narrabri community. It aligns with the *New England North West Regional Plan 2041* and the *Narrabri Local Strategic Planning Statement 2040*. Together, these sets the 20-year strategic directions for Narrabri towards a prosperous and sustainable future.

Within the strategic context, key planning principles for rural land include:

- Protect the agricultural production value of rural land and ensure lawful agricultural enterprises can operate unencumbered.
- Establishing planning and implementation frameworks to maintain the profitability, productivity and innovation of rural economy.
- Minimise the potential for land fragmentation and land use conflict in rural areas, particularly between residential and other rural land uses.
- Expand agribusiness and diversify the rural economy through emerging sectors including renewable energy and food processing sectors.
- Encourage investment, increased productivity and value adding activities within the region.
- Encourage sustainable land use practices and ensure the ongoing viability of agriculture on rural land.

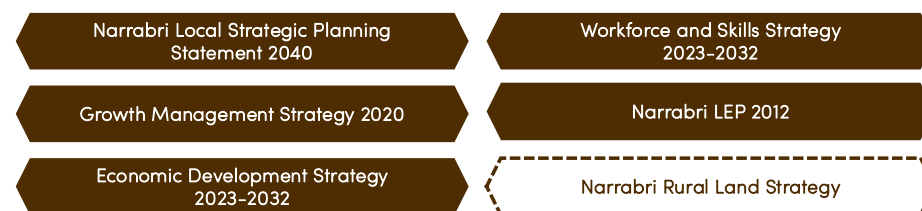
### STATE PLANNING



### REGIONAL PLANNING



### LOCAL PLANNING



## 2.2 Local context

The following section provides a snapshot of Narrabri’s population, economy and what defines its rural character and drivers of change. The snapshot helps define opportunities and constraints in Narrabri, which lead to establishing planning principles and objectives to set the direction for rural land in the area.

### 2.2.1 Regional agricultural context

Narrabri is one of four LGAs within the North West Plains Sub Region, which is part of New England/North West Planning Region in NSW. The North West Plains Sub Region covers Moree Plains, Narrabri, Gunnedah and Liverpool Plains and covers an area of 40,990 km<sup>2</sup>. The region contains some of the most highly productive and sought-after agricultural land in NSW, where the biggest individual contribution is Moree Plains with \$864 million followed by Narrabri Council with \$375 million, see Figure 2. Moree Plains and Narrabri are also the LGAs with the highest agriculture employment with respectively 34.5% and 27.4% (Department of Primary Industries 2020).

Agriculture is a key economically industry for the North West Plains and is particularly important for cotton, broadacre cropping, beef, sheep and wool, poultry, fruits and nuts. Broadacre is the most dominant industry in terms of Gross Value of Production (GVP). See Table 1 for Narrabri’s agricultural production in relation to the North West Plains sub region and NSW in 2015/2016 (Department of Primary Industries 2020).

Narrabri and Moree Plains are commonly known in agriculture as the ‘Golden Triangle’, which produces consistently high yields of prime hard wheat, and the area makes up a considerable percentage of national production of prime hard wheat. Further both shires combined produce 47% of NSW’s cotton, proving to be a growing industry and the single biggest agricultural commodity grown in the North West Plains (Department of Primary Industries 2020).

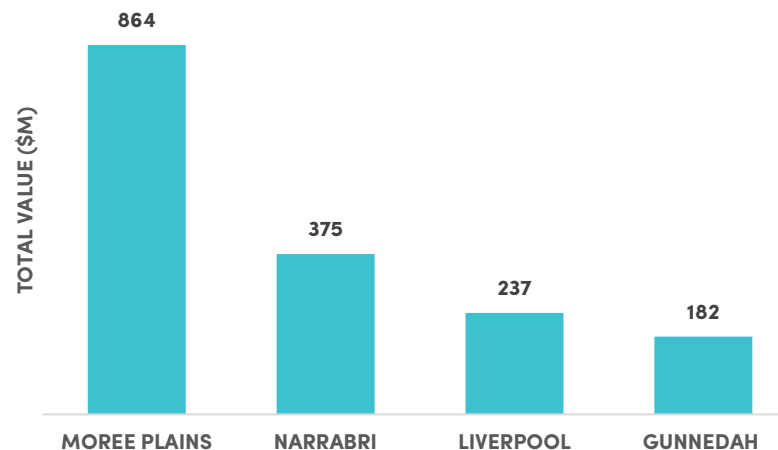


Figure 2. Agriculture value by LGA in the North West Plains Sub Region

Table 1. Comparative value of agricultural commodities

Industry	Narrabri		North West Plains		Narrabri proportion of NSW production
	Value \$M	% of NSW	Value \$M	% of NSW	
Broadacre cropping	\$186.9m	19%	\$989m	24%	4.5%
Cotton	\$140.3m	34%	\$415m	47%	16%
Livestock	\$33m	18%	\$205m	10%	1%
<b>Total</b>	<b>\$360.2m</b>	<b>71%</b>	<b>\$1.609b</b>	<b>81%</b>	<b>21%</b>

### 2.2.2 Narrabri community

Narrabri is expected to see a decrease in younger age groups and increase in older age groups by 2041 (Department of Planning and Environment n.d.). Based on the Growth Management Strategy, Narrabri has seen an outflow of the population between the ages of 20–30 years who leave in search of better education and employment opportunities, resulting in the loss of potential skilled workers. These trends, combined with an overall declining population is expected to increase pressure on industries especially the agriculture sector. The anticipated increase in an aging population is expected to intensify the pressure on infrastructure and services to accommodate evolving needs. Additionally, this demographic shift may result in heightened challenges in sustaining and enhancing these facilities and services due to a potential decrease in demand and financial income.



**Population**  
12,754



**Median age**  
40 years



**Declining population**  
2021: 13,019  
2041: 12,102



**Private dwellings**  
5,960

Narrabri offers a range of community, education, workforce and social opportunities, especially compared to other remote mining and agriculture areas. Despite this, Narrabri has a large proportion of FIFO (Fly-in, Fly-out) and DIDO (Drive-in, Drive-out) workers, which implies that the opportunities, such as suitable housing, are insufficient to encourage FIFO and DIDO workforce to live in Narrabri instead of traveling in and out of the area.

### 2.2.3 Economy

The economy in Narrabri is largely driven by mining and agriculture industries due to the area's rich fertile soils which support the agricultural production, agribusiness, mineral resource production and several research institutions. The strong agriculture and mining sectors mean that Narrabri has a diverse economic base (REMPPLAN n.d.). Narrabri is strategically positioned with easy access to road and rail transportation, which makes export efficient.



**Narrabri**  
Output \$4.5 billion  
Regional exports \$3.000 billion  
Jobs 6,949



**Mining**  
Output \$2.4 billion (53.5%)  
Regional exports \$2.331 billion  
Jobs 1,501 (21.6%)



**Agriculture, forestry and fishing**  
Output \$456.5 million (10.2%)  
Regional exports \$361 million  
Jobs 1,128 (16.2%)

The agriculture sector’s primary activities consist of cotton, grain and oil seed cropping, wool and fat lamb production and cattle. The shire is home to some of the largest multi-national agricultural companies in Australia, which all are supporting the growing industry in Narrabri. Further Narrabri is home to several agricultural research facilities, which support research in new technologies in agriculture (Narrabri Shire 2020b). Narrabri’s agricultural production accounts for 4.8% of the State’s gross agricultural value, which is due to favourable climate and soils, access to national and international markets, strong broadacre cropping and grazing sectors and irrigated crops (Narrabri Shire 2016).

Agriculture has for a long time been the economic base supporting Narrabri, but as noted above employment in the sector has been declining due to specialised and efficient technology. A change in the agriculture sector is giving opportunities for growth in other industries such as tourism, service industries and mining (Narrabri Shire 2016).



**Narrabri’s agricultural production accounts for 4.8% of NSW’s gross agricultural value**

The agriculture and mining sectors are vulnerable to the impacts of climate change and require strategic futureproofing to integrate emerging industries and technologies effectively. This includes industries within renewable energy, recycling and research centres. The agriculture sector is already

transitioning by using less water in production, new types of seeds and grains that are more resilient to climate changes and reintroducing First Nation grains. Being home to several research centres gives Narrabri the opportunity to be leaders within the sector and add value and knowledge to the growing industries in the area. To achieve this, a flexibility in the land use planning framework is needed to respond to the evolving agricultural industries.

Despite the growth in economy, it has not transpired in the growth in jobs in Narrabri, where the area had a 2% growth in jobs from 2012-2020 (Australia n.d.). It is uncertain if agriculture and mining will support future job growth in Narrabri, due to mining being a capital-intensive industry with a large proportion of FIFO (Fly-in, Fly-out) and DIDO (Drive-in, Drive-out) workers and a decline in agricultural employment in recent years due to technological improvements and farm consolidation.

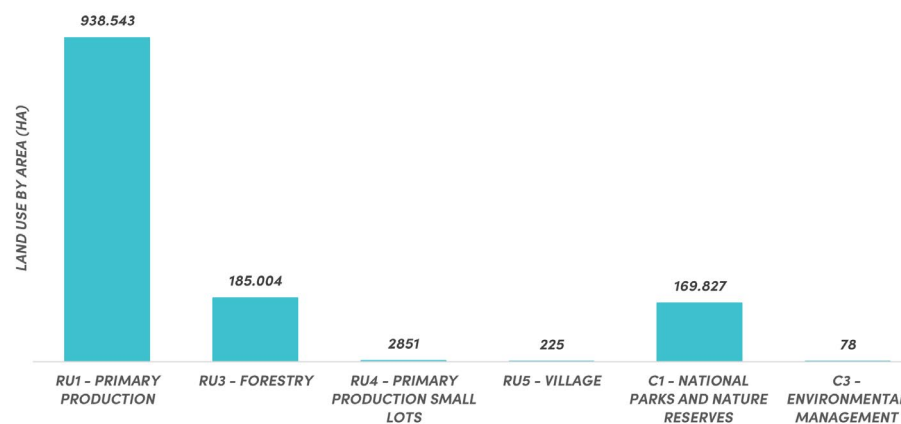


Table 2. Area (ha) of different land uses in Narrabri LGA zoned as either RU or C.

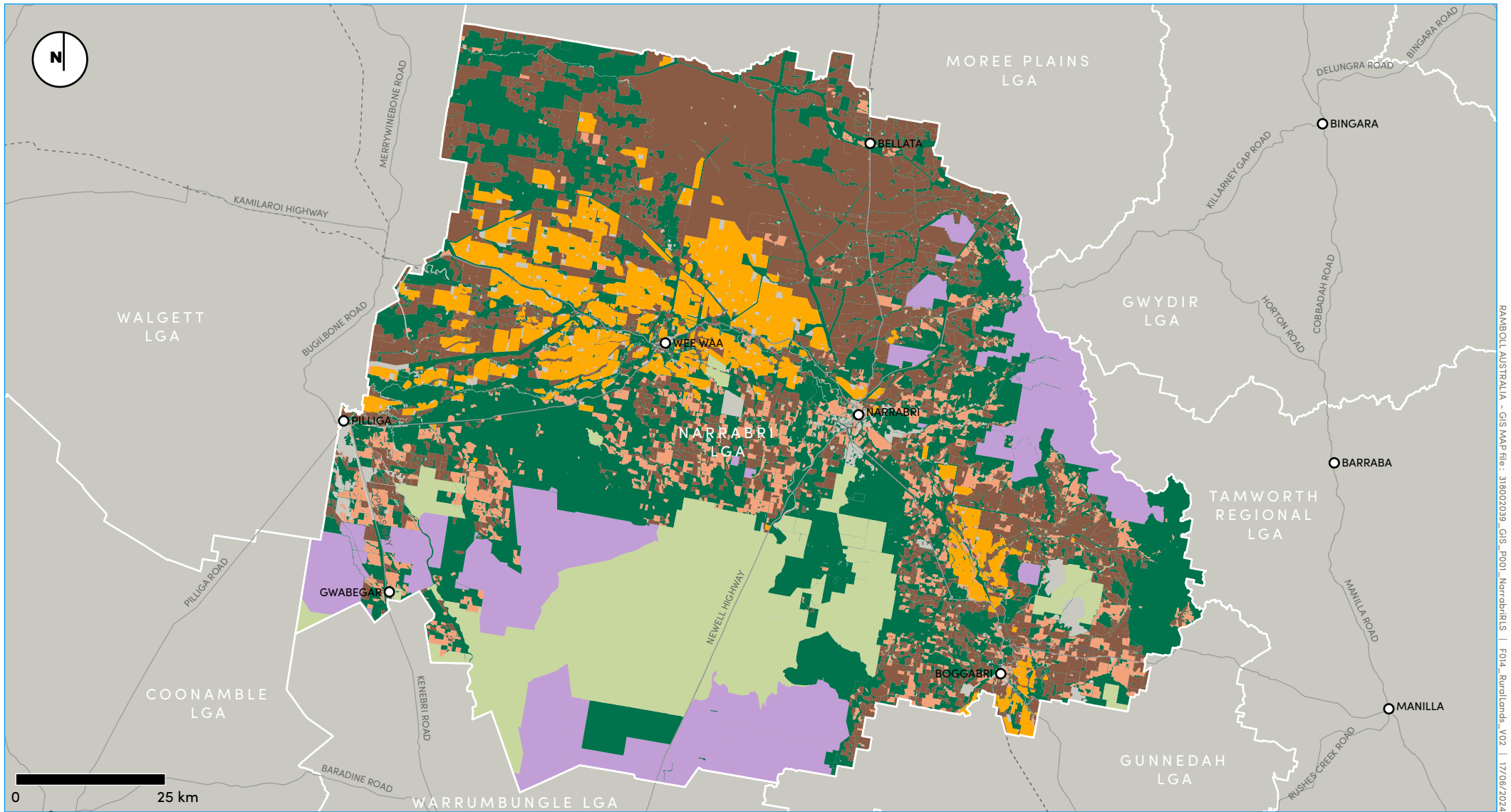
#### 2.2.4 Overview of existing rural lands in Narrabri

Rural land within Narrabri is a mix of land used for agricultural and environmental purposes, occupying 71% of the Shire, covering an area of approximately 9,257 km<sup>2</sup> (Department of Primary Industries n.d.). Most of the rural land in Narrabri is zoned as RU1 Primary Production with small clusters of RU4 Primary Production Small Lots zoned land located near Narrabri town. The Narrabri LEP 2012 subdivision minimum lot sizes for the purpose of a dwelling house are 100ha for RU1 zone and 40ha for the RU4 zone (Narrabri Shire 2020a). Table 2 shows the area (ha) of the different land uses either zoned as rural or conservation in Narrabri.

Narrabri is estimated to contain around 12% of coal reserves available in New South Wales and has been labelled the “New Coal Frontier” in the state due being home to emerging resource industries of coal and gas (Narrabri Shire n.d.-b). Mining is expected to see a decrease as the energy sector is transitioning into renewable sources.

Rural land in Narrabri consists of several different types of land uses in the different zones, where the majority is cropping as shown on Figure 3.





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**Legend**

- |              |                                  |                                 |         |
|--------------|----------------------------------|---------------------------------|---------|
| LGA boundary | Land use (NSW DCCEEW)            | 3.2.0 Grazing modified pastures | Railway |
|              | 1.1.0 Nature conservation        | 3.3.0 Cropping                  | Road    |
|              | 2.1.0 Grazing native vegetation  | 4.3.0 Irrigated cropping        |         |
|              | 2.2.0 Production native forestry |                                 |         |

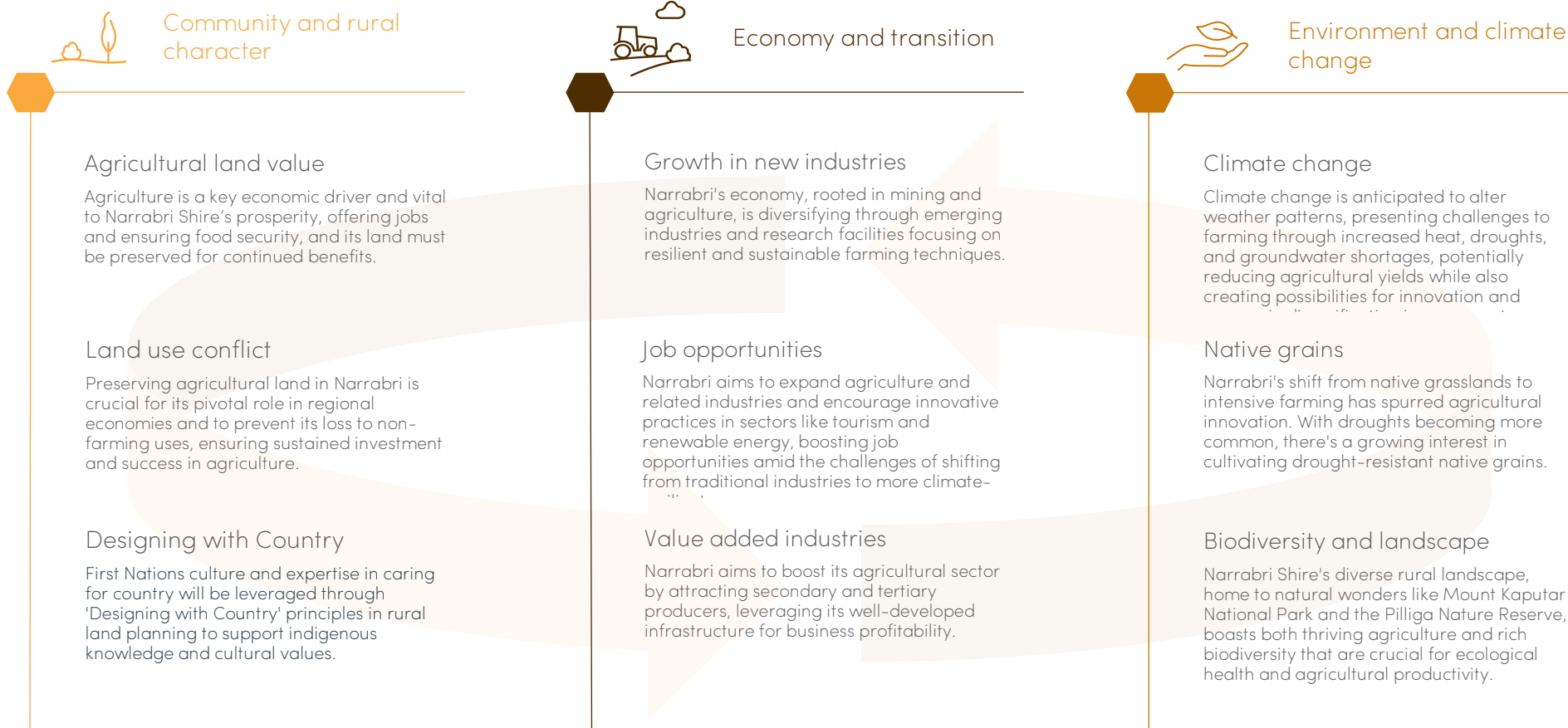
**A4**  
1:900,000

**Figure 3 : Primary use of rural land by use**

## 2.3 Drivers of change

Based on detailed background analysis of relevant documents, data analysis, stakeholder engagement and workshops, the following opportunities and constraints have been identified.

As part of the stakeholder consultation a number of key themes were identified, including support of research facilities and industries, transition in existing industries and growth in new ones, and the pressure from climate change and need for more resilience in Narrabri. These drivers of change inform the opportunities and constraints under three overarching themes:



# Part 2

## Future directions for rural lands



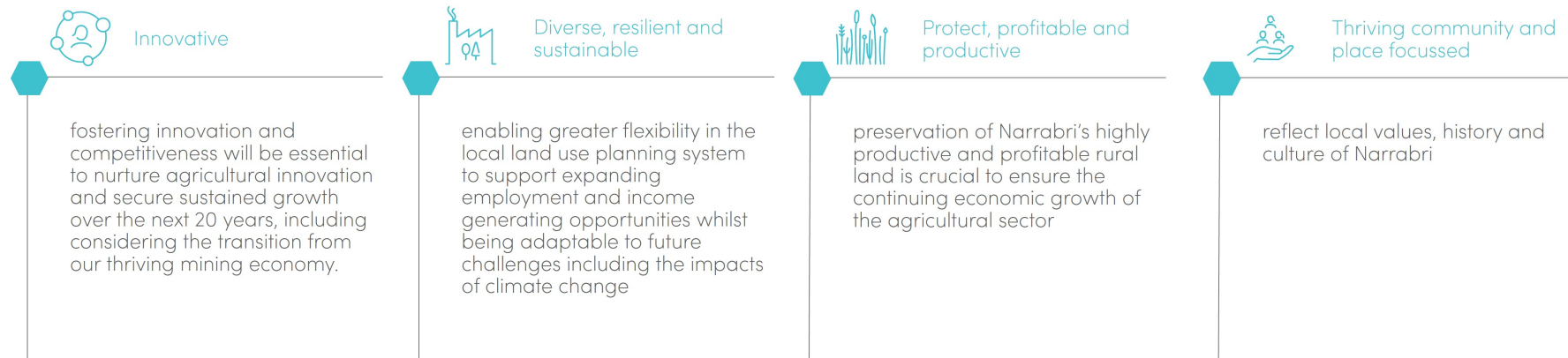
### 3. Vision

This Strategy provides the framework for managing growth, change and development for rural land in Narrabri for the next 20 years. The Strategy considers potential growth beyond its timeframe as well as the need to ensure planning decisions do not compromise future planning needs.

The vision for Narrabri Shire’s rural land is based on protecting agricultural viability while driving growth through value-added opportunities. To achieve the vision, the Strategy will focus on four key interrelated outcomes described below.

#### VISION FOR NARRABRI RURAL LAND

Rural land in Narrabri prioritises productivity and innovation. We will foster diverse, resilient, and sustainable land uses, cultivating a thriving rural community where tradition meets innovation. Together, we lay the foundation for prosperity, ensuring a bright future for generations to come.

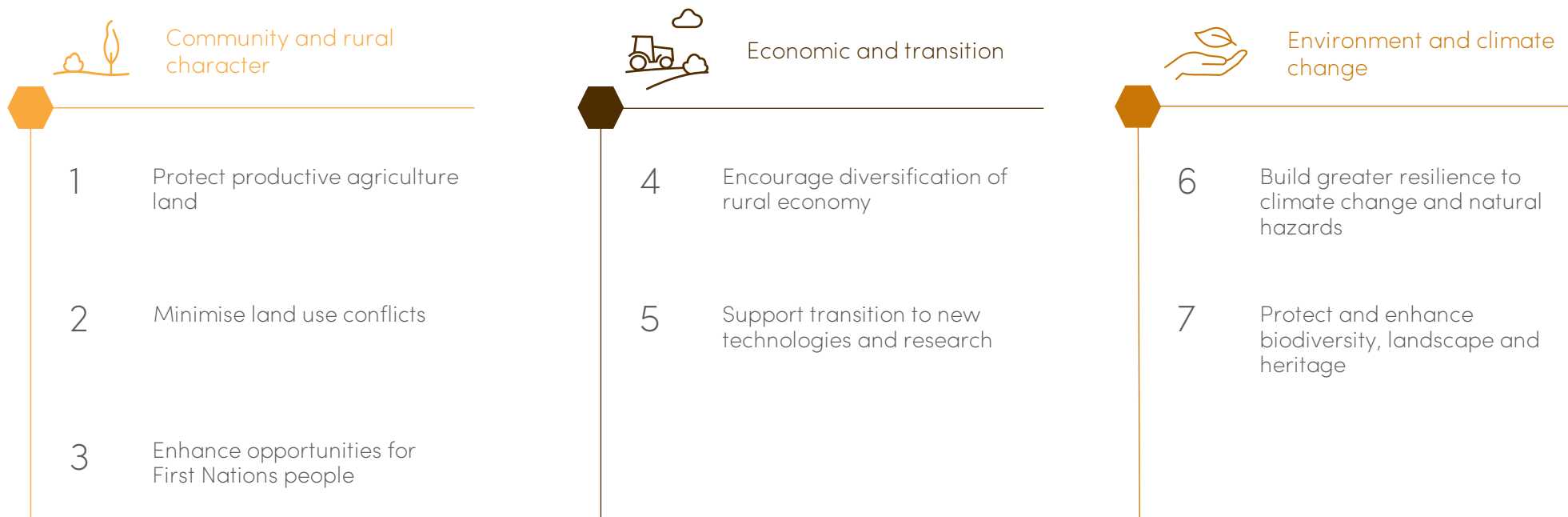




## 4. Planning principles

Based on identified opportunities and constraints, stakeholder engagement and workshop, and associated research the following principles have been established to define recommended actions for future planning of rural land.

Three interrelated focus areas for rural land in Narrabri provide the basis for generating targeted planning principles for rural land. The planning principles and recommended action aligned with these focus areas, underpinning the future of Narrabri rural land, are described in the following sections.



## 4.1 Community and rural character

Narrabri's identity is highly influenced from being a mining and agriculture Shire over the past 160 years, as well as being home to a large First Nation community, which makes the region unique. This also means that several interests need to be considered when planning for rural land, such as creating opportunities for agricultural production of traditional grains.

Agriculture is the second largest contributor to Narrabri Shire economy and the backbone of it, and protection of its land is required to maintain the benefits that come along with it. The agriculture sector in Narrabri provides jobs, prosperity, food security, research and environmental outcomes.

### 4.1.1 Principle 1: Protect productive agriculture land

#### Opportunities and challenges

##### **Biophysical Strategic Agricultural Land**

The NSW Government has mapped the state's most valuable farming land, known as Biophysical Strategic Agricultural Land (BSAL), which has the best quality soil and water resources and plays an important role in the agricultural industry. The BSAL mapping can be assisted by appropriate land use planning controls by providing legal protection through zoning and other controls (NSW Department of Primary Industries 2017). Land with biophysical attributes has the best combination of soil and water characteristics and is highly suited for cropping purposes.

The NSW Government is currently in the early draft stages of mapping State Significant Agricultural Land (SSAL) across the state. This mapping is derived from existing statewide data, focusing on areas with the most relevant characteristics that define the highest quality agricultural lands. This initiative aims to identify and protect lands critical for agricultural production based on a comprehensive set of criteria.

This mapping is yet to be finalised; however, it forms part of the evolving data and information available to guide and inform state and local government along with industry on the location of the most important agricultural land, its value and contribution to regional economies.

Important Agricultural Land maps identify lands that are highly suitable for important agricultural industries at a local and regional scale. They complement the mapping of state/nationally significant agricultural lands. The map was developed using available spatial data sets and were verified by stakeholder workshops. They are supported by a series of agricultural industry profiles. Six case study local government areas were mapped due to their diverse agricultural landscapes and industries. Whilst this mapping does not extend to cover Narrabri Shire, the NSW Department Primary Industries *A guideline to identifying important agricultural lands in NSW* was developed from the pilot and is the current guideline for mapping important agricultural lands in NSW. These guidelines are applicable if further mapping is to be undertaken across Narrabri.

##### **Minimum lot size and fragmentation of productive land**

Figure 4 shows a review of the rural planning controls in relation to Minimum Lot Size (MLS) and Biophysical Strategic Agricultural Land (BSAL). The review examines rural zones and the minimum lot sizes to see if there is a correlation in approach, which should be considered in the Strategy.

There is a need to preserve larger scale agricultural land within the Shire to support existing and emerging agricultural activities while preventing further fragmentation of rural land. Large land holdings are an advantage for viable agricultural operations to grow, invest and diversify.

A map showing the location of the important agricultural lands and minimum lot sizes are provided in Figure 4. The key findings are:

- Generally, the BSAL is identified as RU1 Primary Production land across Narrabri LEP 2012. There is a small pocket of rural - residential land

identified for two-hectare minimum lot size on the eastern side of Narrabri that is also identified as BSAL.

- Apart from the above all other BSAL has a minimum lot size of 100 hectares.

Fragmentation of rural land is common, not just to Narrabri. This fragmentation has been enabled over the years through such things as LEPs with clauses that encourage concessional lots to enable the farmer to retire and still live on the land and to then pass the farm on to family members to run, or clauses that permitted the farmer to create additional lots to sell to help through rough times on the land. Legacy lots from previous LEPs is also a contributing factor to fragmentation and rural land use conflict.

While the idea of enabling farmers to remain on the land by permitting additional subdivision entitlements was well intentioned, it created lots below the minimum lot size, leading to significant fragmentation of rural lands and rural land use conflict due to expectations around legacy dwelling entitlements.

The current RU1 and RU4 zones under the Narrabri LEP 2012 prescribe a minimum lot size of 100ha and 40ha respectively. This should be maintained to continue to support a range of agricultural uses while managing already fragmented land and associated dwelling entitlements.

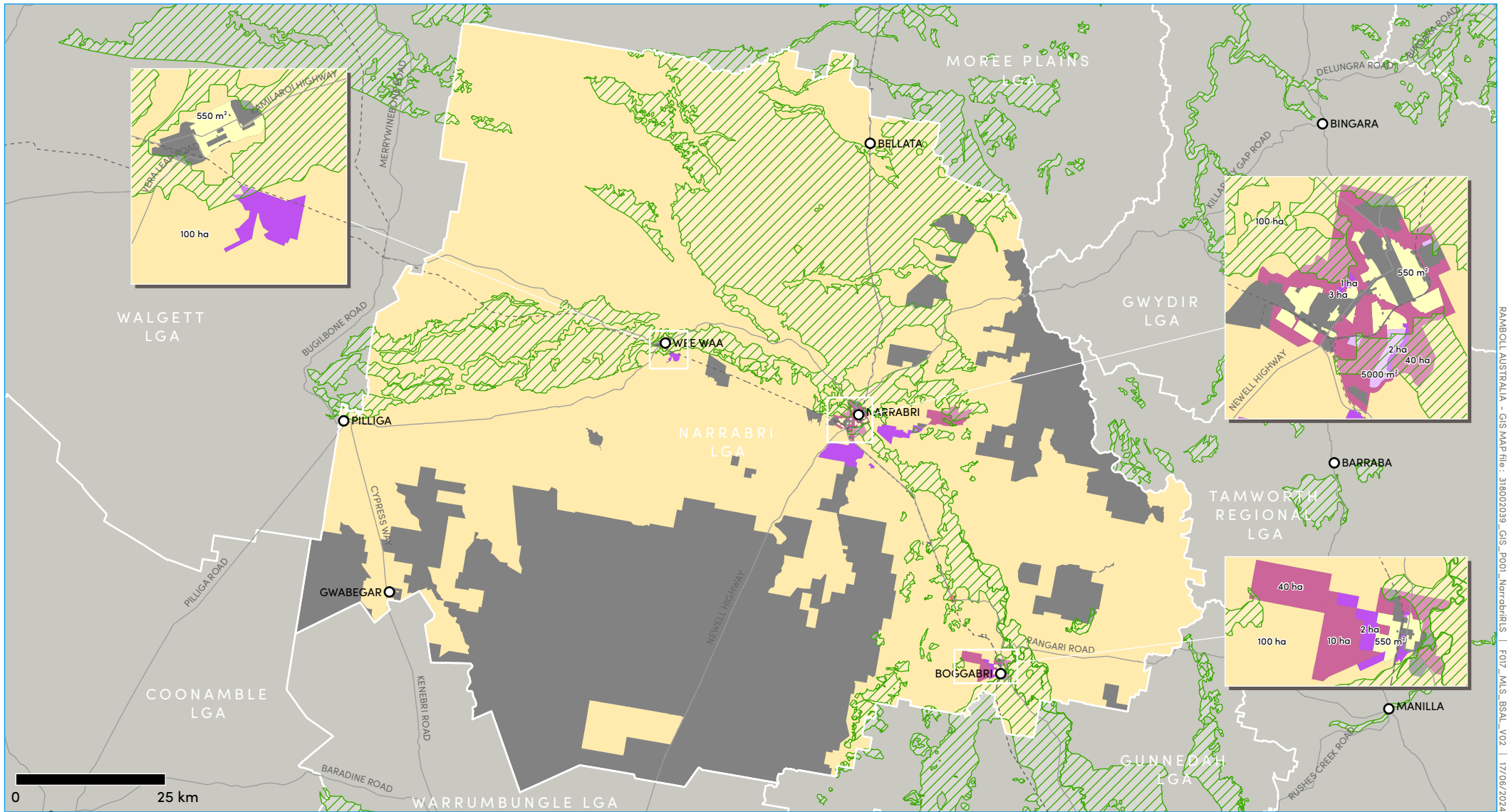
## Objectives

- High quality agricultural land aligned with BSAL and SSAL land should be zoned RU1 Primary Production.
- Rural residential or 'lifestyle' housing are to be located near existing townships to consolidate rural living near existing infrastructure and avoid fragmentation of RU1 zoned land.
- Limiting non-agricultural incompatible land uses on highly productive and high value agricultural land.

## Recommended actions

- Review the opportunities and constraints of BSAL, SSAL and Important Agricultural Land (IAL) land, when all mapping is available, with a view to applying RU1 Primary Production zone to protect and sustain their value for future rural productivity.
- Review dwelling entitlements in RU1 Primary Production Zone to avoid changes to minimum lot sizes for land that create additional dwelling eligibilities and rezone land near Narrabri town for rural residential where demand is evident.
- Maintain Narrabri LEP 2012's 100ha and 40ha minimum lot size within the RU1 and RU4 zones.
- Establish development controls to ensure all new dwellings located on rural land do not compromise IAL, BSAL, scenic amenity and agricultural activities.
- Strengthen development controls to discourage dual occupancy development on RU1 land.
- Manage and monitor the supply of R5 large lot residential land through Local Housing Strategy process.





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**Legend**

- |  |                      |            |         |
|--|----------------------|------------|---------|
| LGA boundary                                   | 550 m <sup>2</sup>   | 10 ha      | Railway |
| Biophysical Strategic Agricultural Land (DPIH) | 2,000 m <sup>2</sup> | 40 ha      | Road    |
|  | 5,000 m <sup>2</sup> | 100 ha     |         |
|  | 1 ha                 | Other zone |         |
|  | 2 ha                 |            |         |

**Figure 4 : Overlay of BSAL mapped land and minimum lot sizes**

## 4.1.2 Principle 2: Minimise land use conflicts

### Opportunities and challenges

#### Right to farm

If agricultural land is not protected from other uses such as residential or industrial uses it is permanently lost for commercial agricultural production. Agriculture has a very important role in regional communities such as Narrabri but is often not prioritised in the overall strategical direction for the area and thereby at risk of being encroached upon. Rural land should predominantly only be used for agricultural production. Encouraging ongoing investment in agriculture and protecting its land and resource base is critical to achieve long-term success.

Land use conflicts occurs when land uses or activities are incompatible with the views, expectations or values of the surrounding community and are near each other. The conflicts most often occur due to different expectations and aspirations of landholders, as well as a lack of understanding of agriculture practices and poor land management. Land use conflicts can potentially constrain legal farming operations and reduce the feasibility of investment in agricultural operations. Land use conflicts occur both when agricultural uses impacts on residential uses and when other land users impact on farmers. Agriculture is the largest industry in Narrabri by land use and in some areas located nearby sensitive land uses such as residential.

The *Right to Farm Act 2019* and *Right to Farm Policy 2015* supports farmers undertaking lawful agricultural practices without conflict or interference arising from complaints from neighbours and other land uses. The policy reinforces the rights and responsibilities of farmers and establishes a standard for ongoing monitoring and evaluation of land use conflicts.

Conventional agriculture, such as farming, can lead to land use conflicts due to noise, odour, dust, smoke, water quality issues, traffic and complaints from

nearby residential neighbours. Conflicts impact the overall community and its wellbeing. Land use conflicts can make it difficult for agricultural industries to plan for future investments due to uncertainty about future planning of land and complaints about legal farming activities.

Education and effective communication between property owners is critical when new land uses and activities are introduced to rural land. There are a number of NSW best practice guidelines for different sectors of the agricultural industry that have been developed by the NSW Department of Primary Industries (DPI) including buffer guidelines which should be used to guide planning on rural land.

#### Rural Housing

The NSW Agriculture Commissioner's report, *"Improving the Prospects for Agriculture and Regional Australia in the NSW Planning System"* (2021), highlighted that residential development is increasingly fragmenting the rural landscape. This fragmentation affects rural land values, introduces sensitive receptors potentially incompatible with agriculture, and may render agricultural operations unviable.

Fragmentation of agricultural land is a primary factor diminishing its capacity for productive agriculture. This issue is currently recognised by Narrabri LEP 2012 in the objectives of the RU1 Primary Production zone, which aims *"to minimise the fragmentation and alienation of resource lands"*. Fragmentation is largely driven by decisions to reduce minimum lot sizes or allow dwellings on undersized lots.

Ad hoc development of houses on undersized lots in rural areas undermines strategic planning efforts and introduces potentially incompatible land uses into the agricultural landscape. This practice increases the risk of land use conflicts and generates uncertainty for industries investing in rural regions.

The historical planning provisions allowing for the ad hoc emergence of dwellings on rural land pose a significant risk to the rural economy by

introducing sensitive receptors in proximity to agricultural businesses. Sensitive receptors can impair the production, effectively sterilising rural land and reducing the critical viable land mass for productive agricultural uses.

Not all properties in rural zones have the eligibility to build a house.

Where a dwelling is proposed under clause 4.2B 'Erection of dwelling houses and dual occupancies on land in certain rural and conservation zones' (Narrabri LEP 2012) a dwelling eligibility search is required to confirm whether the pre-requisites are met. Consideration is given to:

- Subdivision approvals and the date of the approval where dwellings were permitted. For example, land may have been subdivided under historic LEP provisions. It is important to determine that the subdivision was lawfully approved enabling the dwelling eligibility.
- The history of the landholding. Consideration of the meaning of "existing holding" is to take into consideration the dates for when dwelling eligibilities were first established. Regarding the Narrabri LEP 2012, the existing holding dates that apply are 7 January 1966 in relation to land to which the Narrabri LEP 1992 applied to or 6 June 1986 in relation to land to which the Narrabri LEP No. 2 applied to.

If there is no dwelling eligibility, there are limited options available to obtain development approval for a house. Consolidating neighbouring lots to create a larger lot that meets the minimum lot size in the LEP can provide a dwelling eligibility.

Alternatively, development applications for dwellings on undersized rural lots may be lodged as a request to vary the minimum lot size requirement using the provisions of Clause 4.6 Exceptions to development standards of the applicable LEP. This clause enables the landowner to apply for a house on an undersized lot by seeking a variation to the minimum lot size. The applicant must demonstrate why the minimum lot size provisions are either unreasonable or unnecessary in the circumstances. There is no guarantee that the application for variation will be supported and that any variation of

the lot size by more than 10% will be assessed, nor that concurrence will be provided by the NSW Government.

Applying the two dates of historic existing holding provisions is problematic, given the length of time (since 1966) and the historic records that need to be investigated to determine if the entitlement is applicable or not. Consideration should be given to removing the existing holding provisions within Narrabri LEP. It is important to note that landowners have had opportunities since 1966 to establish dwelling eligibilities on these properties and build a house.

The NSW Agricultural Commissioner has recommended measures to enhance rural zoning effectiveness to prevent the fragmentation of rural land and phase out the ad hoc development of dwelling houses on undersized lots. The Commissioner recommends that Councils should phase out concessional dwelling eligibility and clauses related to existing holdings within rural zones. To facilitate this transition, landholders currently eligible for dwellings under these provisions should be granted a five-year period to submit their development applications, after which their eligibility will expire. Introduction of a sunset clause would enable the community to utilise the existing holdings provision to lodge a development application for a brief period prior to it ceasing to have effect and removal.

It is acknowledged that existing holdings and dwelling eligibilities are an ongoing challenge for many rural and regional local governments. It is important to clearly communicate to the community about any proposed changes to dwelling eligibilities.

#### **Buffers and agent of change**

Planning for buffer zones around heavy agricultural industries can be one solution to avoid land use conflicts. The NSW Department of Primary Industries (DPI) has developed an interim guideline '*Buffer Zones to Reduce Land Use Conflict with Agriculture 2018*' to ensure buffer zones are included in development, particular residential development, where property and

landowners have relied on adjacent land to act as a natural buffer. The principle of the agent of change places the responsibility on the initiator of change to provide safeguards to minimise the impact on the operations of existing land uses.

This principle is particularly crucial in rural areas. Introducing new sensitive land uses, such as rural dwellings, without considering or addressing the potential impacts of existing productive agricultural land uses can restrict the productivity of those agricultural uses. Narrabri has high concentrations of broadacre and cropping agricultural uses, which should embrace the principles of the agent of change to ensure its ongoing viability and protection.

### **Biosecurity**

Biosecurity protects the environment, the local economy and community from biosecurity threats and is a shared responsibility. Practicing good biosecurity will support access to premium markets both in Australia and internationally, as well as improve and deliver better yields and decrease costs of primary production. Ensuring good biosecurity will also provide locally grown, safe food and fibre and reduce stock losses and infrastructure damage by pests and diseases.

Biosecurity aims to minimise and manage risks, conserve biodiversity and cultural heritage, as well as prevent biosecurity risks spreading to other areas. It is vital for both the agriculture industry, economy, environment and community. The agriculture industry is obligated to follow the *Biosecurity Act 2015*, which prevents entry of threats to Australia and helps manage and mitigate risks from pests, diseases, weeds and contaminants. In Narrabri the research centres provide knowledge and research on improving different types of crops resilience towards biosecurity threats such as pests and diseases, which is valuable for not only the businesses in Narrabri but the whole agriculture sector.

### **Objectives**

- Minimise potential land use conflicts in Narrabri through planning policy and communication with new and existing landowners on how to live in a changing rural environment.
- Ensure ongoing protection for primary productive agricultural land through land use buffers.
- Support the rights of farmers to undertake lawful agricultural practices.
- Protect productive agricultural land from economic pressure of competing land uses and urban encroachment to protect the future agricultural sector.
- Recognise and acknowledge biosecurity risks for agriculture industries.
- Minimise natural hazard risks and their impacts on rural living.

### Recommended actions

- Minimise subdivision of rural land unless it improves agricultural productivity or retains agricultural land.
- Remove holdings provisions by incorporating a sunset provision into the LEP. The sunset clause will enable information to be communicated to the community and provide the opportunity to enquire about dwelling entitlements prior to the proposed changes coming into force.
- Support the *Right to Farm Act 2019* and the *Right to Farm Policy 2015*, which support farmers to undertake lawful agricultural practices without conflicts and complaints from neighbours and other land uses.
- Require intensive agriculture, plant agriculture and other non-agriculture land uses to apply the NSW DPI 'Land Use Conflict Risk Assessment Guide' as part of the development application process, to demonstrate the use will not unreasonably limit the operation of existing agriculture and related industries nor restrict the potential future use of productive agriculture land.
- Support opportunities for intensive livestock agriculture in suitable locations and avoid encroachment of sensitive receptors.
- Manage biosecurity such as invasive species control, pest controls and preparing for future biosecurity emergencies.
- Work with relevant stakeholders to educate landholders to their general biosecurity obligations as outlined in *Biosecurity Act 2015*.

### 4.1.3 Principle 3: Enhance opportunities for First Nations people

#### Opportunities and challenges

The New England North West is rich in Aboriginal cultural heritage with the connection of Aboriginal communities to their ancestral country being passed down through generations. Narrabri's population consists of nearly 15% Aboriginal and/or Torres Strait Islander people, compared to 3.4% of NSW (Australian Bureau of Statistics n.d.).

The region has a rich First Nations culture and heritage with a large community, which has great knowledge on protecting and caring for country, which should be actively supported when planning for rural lands. An example of this, is to identify areas of cultural heritage for the First Nations people in Narrabri to ensure these areas are protected from other land uses. Areas of importance for cultural heritage could be used for education and tourism land uses and activities, which would support job opportunities for First Nations people.

Ensuring that First Nations people are engaged in and encouraged to participate in preparation of local plans and strategies should be prioritised to protect their cultural heritage and heighten inclusiveness in the planning processes. The overall outcome should be to deliver opportunities to increase the economic independence of the community through training, employment and tourism.

Providing necessary educational facilities for First Nations people within the agricultural sector and relevant industries will be beneficial for the industry and community in Narrabri and will lead to educated workforce and job opportunities. Further, First Nations knowledge on native grains can provide insights into how the agricultural sector can be more resilient to a changing climate, with there being further potential for collaboration between First Nations people, local businesses and research centres.

Prioritising people and their needs when designing is widely regarded as fundamental in contemporary design and planning. However, appreciating an Indigenous or Aboriginal world view suggests that there are limitations imposed by an entirely human-centred approach to land use. If people and their needs are at the 'centre' of planning considerations, then the landscape and nature are reduced to second order priorities.

Designing with Country principles will be developed and integrated in planning processes related to rural lands to support First Nations knowledge, experiences and cultural interests. We will explore, listen, support and collaborate with First Nations people to identify opportunities to strengthen economic self-determination of communities and seek to achieve better social and economic outcomes for their land.

Local Aboriginal Land Councils (LALCs) are central to the Aboriginal land rights network. LALCs work to improve, protect and foster the best interests of all Aboriginal people within their area. Opportunities exist to work more closely with the Narrabri LALC to identify and map land both owned by the LALC and Government (Crown) to investigate the potential for agriculture.

### Objectives

- Support opportunities for First Nations businesses to grow and collaborate with leading agricultural businesses in Narrabri to share knowledge.
- Support educational and research centres to investigate further in First Nations agriculture and partner with First Nations agricultural businesses to support job opportunities.
- Collaborate with First Nations communities in designing with Country and farming practices when planning for rural areas.

### Recommended actions

- Narrabri Shire Council work more closely with the Narrabri LALC to build capacity and share knowledge about Aboriginal land and the opportunities to support the aspirations of Aboriginal people and communities.
- Develop a register and portfolio of First Nations Primary and Agricultural Industries case studies.
- Use mapping systems to identify and analysis opportunities for primary production on underutilised Narrabri LALC and Crown land.



## 4.2 Economy and transition

The Narrabri region is known for its productive mining and agriculture industries which has defined the baseline of the economy and been the main employers in the region. Transition in both sectors lead to opportunities and growth in new emerging industries and a greater diversification of the economy. Narrabri is also home to a several research facilities that provides new technology and knowledge on resilient and sustainable agriculture.

### 4.2.1 Principle 4: Encourage diversification of rural economy

#### Opportunities and challenges

##### Support for new and diversified industries

Narrabri Council adopted *Local Strategic Planning Statement 2040* and *Growth Management Strategy 2020* in recent years, which both set out directions to grow and support the agriculture sector. To support this growth, it is key to not only support existing industries in Narrabri, but also be conscious about supporting new emerging and evolving industries and connecting the different industries to enable potential value-add businesses. Further, the growth is also dependent on sufficient infrastructure to support the production of the new industries. The growth should build on existing and established industries such as cotton and broadacre, whilst supporting opportunities for new areas within the sector such as Indian mustard seeds and innovative value-adding businesses which also support circular economy. Industry Specific Growth Strategies are to be developed to support the growth of existing and emerging industries. The support needs to be visible in both the planning framework and in sufficient infrastructure, that can support the different types of industries. Focus industry sectors for future diversification of Narrabri rural economy include the following.



#### Agri-tourism

Narrabri is well positioned between Sydney and Brisbane and serviced by both air, road and rail infrastructure making it an ideal place to support agri-tourism activities. The Shire is located on the intersection of the Newell and Kamilaroi Highways, which both are actively promoted as touring routes. The different rural businesses and research institutions is an opportunity to attract both scientific, technical and leisure tours and educate visitors about the knowledge Narrabri holds in the sector.



#### Renewable energy

Narrabri is strategically well located to attract investment in renewable energy development to the area, including both wind farms, solar energy and battery systems. The area has high daily solar exposure, making the second highest solar penetration region in NSW. This positions Narrabri as a leader in renewable energy. Development of a solar farm of 100MW typically employs couple of hundred people during construction, which both supports the economy and job growth. The key limiting factor in the growth of renewable energy has been grid capacity limitations which needs upgrades (Narrabri Shire 2016) as well as uncertainties in state and federal government energy policies. The transition to renewable energy needs support from efficient sustainable infrastructure and needs to be planned in alignment with productive agricultural land. To support the transition to renewable energy, Council has plans for a Renewable Energy Hub in Narrabri.



#### Circular Economy

Agriculture is one of the leading contributors to greenhouse gas emissions, water consumption and pollution, as well as having large impacts on the environment (Australian National University n.d.). The agriculture sector holds great opportunities in supporting circular economy practices which are already being



investigated by local businesses in Narrabri. An example is a bio-digester which produces both biogas and natural fertilisers when handling organic waste. The biogas can be used for cooking, generating electricity or as fuel for vehicles. Supporting new innovative technologies within circular economy and connecting local businesses will help close the loop on waste, generate value-added industries and improve the sustainability of agriculture practice.



### Horticulture

Horticulture is a growing sector that has the potential for future growth in Narrabri, especially for intensive horticulture both soil based and Controlled Environment Horticulture (CEH). Intensive horticulture utilises temperature-controlled environments to increase productivity and reduce the risk of weather or other external factors. However, a key constraint for horticulture is water security since the industry is dependent on access to water. With ongoing research in making the industry more resilient and less dependent on access to water, there is a great opportunity for more diversification in the economy in Narrabri. Other factors critical to CEH include access to natural gas, flat topography, mean annual temperature below 26°C and a population centre with higher order services. Soil based horticulture is likely to be more suitable for the Narrabri region. Perennial horticulture, such as fruit and nuts, also require high security water entitlements, injection of significant capital to establish orchards, cool stores and has a high seasonal labour requirement. It also requires the supporting services and infrastructure such as daily freight service into capital cities, local supplies inputs and equipment specific for horticultural production.

New emerging industries located in rural lands are likely to extend beyond the agriculture sector and it is key that the planning framework ensures that non-agricultural uses are compatible with primary agriculture production,

the rural character and environmental capabilities of the rural land. The need and support of both existing and emerging industries will potentially change over time of this strategy and the planning framework should be flexible to respond to long term economic trends. Pressures to changing, or diversifying, current farming operations can be generated both “internally” from existing residents seeking alternatives to current ways of living and doing business, and “externally” from new arrivals bringing with them different expectations, knowledge and attitudes.

Further, the dynamic nature of the agricultural industry means that farmers are experiencing loss of markets, reduced commodity prices and imperative to either ‘get big or get out’. The Narrabri regions traditionally strong broadacre farming industry is not immune to these types of pressures. An increasing number of farmers are also seeking supplementary incomes either through on-farm diversification or off-farm employment, while others wish to retire on the property. An appropriate mix of land uses must be considered to sustain the rural population base.

As a result of these changes, the range of land use activities in rural areas are expected to continue to diversify and demand for rural lifestyle living in the Narrabri region can be expected to continue. There is potential for a broader range of rural-based activities including value-add processing across land zoned for primary production under Narrabri LEP 2012.

The term “agri-business” is often used to encompass the economic sectors for farming and farm-related commerce. It involves all the steps for getting agricultural goods to the market, including production, processing and distribution. Agri-businesses are associated with the production, processing, marketing and distribution of agricultural products, often at a large and integrated scale.

The current land use permissibility within the RU1 Primary Production zone under the Narrabri LEP 2012 enables an extensive and wide variety of land uses across all sectors including agricultural, residential, tourism and visitor

accommodation and rural industry. The current land use permissibility in the Narrabri LEP 2012 RU1 zone supports ‘agri-businesses’ and it is considered that there is no need to modify the “permitted” land uses to support agri-business.

### **Value-added industries**

A strong agriculture sector presents opportunities to leverage current industries and increase value adding opportunities and establish industries for by-products. The Council has a great interest in obtaining and attracting secondary producers and tertiary producers, such as milling and processing, to Narrabri. The area has the strength of an efficient infrastructure network, which makes it profitable for businesses locating to Narrabri due to container packing facilities, highway access and the future Inland Rail, which will connect Narrabri to Melbourne, Brisbane and regional Victoria, NSW and Queensland.

Value added opportunities can lead to cross-section businesses across both agriculture, circular economy and research centres, which will support the foundation of the economy in Narrabri. Narrabri is unique compared to other surrounding areas due to being a hub for research in different industries within agriculture, potentially leading to be the frontrunner of new technology and innovative value-adding possibilities. Retaining manufacturing in both second and third phase in Narrabri will lead to growth in economy and population as well as job opportunities, which generally will improve the livelihood and community in Narrabri.

To boost Narrabri's economic attractiveness, the Council must reinforce existing businesses and strategically advertise the area's opportunities, aiming to draw in new companies to settle in the region.

### **Large scale industry**

The Narrabri Special Activation Precinct program (Narrabri SAP program) identified opportunities for large-scale industrial processing linked to energy and gas. Examples include fertiliser and chemicals, bio-products, grain stores and handling, and renewable energy parts manufacturing. Due to the separation distances required for these types of industries for the purpose of land use safety or amenity (noise, odour, visual) means locating these types of industries is often problematic.



### **Potential energy precinct**

The Narrabri SAP program identified a potential location for large-scale, potentially hazardous and offensive employment-generating industries west of Bohena Creek, which currently grazing land and is zoned RU1 Primary Production. This location would allow such industry to locate with large buffers, or separation distances, to sensitive receptors, but is remains sufficiently proximate to the Narrabri Township for workforce access. This type of industry would require detailed assessment and mitigation of potential environmental, social and economic impacts. For example, noise impacts would be evaluated on a case by case basis in accordance with the NSW Environmental Protection Authority's Noise Policy for Industry.

To support the long term economic growth of Narrabri, the planning framework should consider suitable sites for these types of large scale industries considering the following factors (but not limited to):

- Minimise fragmentation or sterilisation of agriculture land
- Minimise land use conflicts with sensitive receptors and productive agriculture uses (e.g. biosecurity, noise, odour, air quality)
- Good road and/or rail access
- Adequate water, electricity and gas supply
- Local employment generation potential and proximity to labour supply

- Avoid areas of high value biodiversity, minimises impact on cultural values, manages bush fire risk, and avoids high risk flooding areas.

### **Job opportunities**

Councils adopted *Local Strategic Planning Statement 2040* and the earlier *Growth Management Plan 2020* both set out directions to grow the agriculture sector as well as related industries on rural lands. Both strategies support diversification on rural land and identifying opportunities to grow and promote innovation in the agricultural sector, as well as support the tourism and renewable sector, that can lead to growth in job opportunities in Narrabri. An example of this is facilitating appropriate smaller-scale renewable energy projects using solar, hydro or other innovative storage technologies (Narrabri Shire 2020a).

Transition in the industries on rural land can lead to several challenges in the community and economy. Narrabri might experience a decrease in jobs in the traditional rural industries, while transitioning into new innovative types of industries and technologies in the rural lands such as renewable energy and new technology in agriculture, that will make the sector more resilient towards climate changes. Major projects and further research in the pipeline in agriculture and renewable energy sectors can lead to a positive impact on population growth and job opportunities in Narrabri and support the growing industries and economy.

### **Long term transition of resources and energy sector**

The mining sector has dominated both the economy and employment in Narrabri for decades, but with changes in the market and a greater focus on a clean energy transition consideration needs to be planned for changes to the mining sector. Despite the price of coal being steady, it is expected that the mining industry in the medium- to long-term will decline due to global economic and policy influences beyond the control of state and federal governments (Renewal 2023).

With a predicted decreasing focus on mineral resources such as mining in the coming years, there will be a stronger focus on clean energy and renewable energy such as solar farms. With the transition, Narrabri has the opportunity to focus on how the mining land can be restored to support changing land uses and restoration of the land. With multiple examples in Australia and the rest of the world on how to restore mining land in a sustainable way, it gives inspiration on how to support new growth in industries, job opportunities, communities and bringing back nature. Restoring mined land can lead to support of biodiversity, recreational land uses and clean industries such as renewable energy, regenerative farming and other industries that regenerate rather than extract.

With a climate suitable for both solar and wind energy, Narrabri is in a position to become an “Energy Shire” with many levels and types of energy production. However, the key constraint for renewable energy is the current infrastructure network which would need to be improved to support growth in renewable energy. Greater understanding of the electrical network and capacity will assist Council and the renewable industry identify appropriate locations for locating renewable projects.

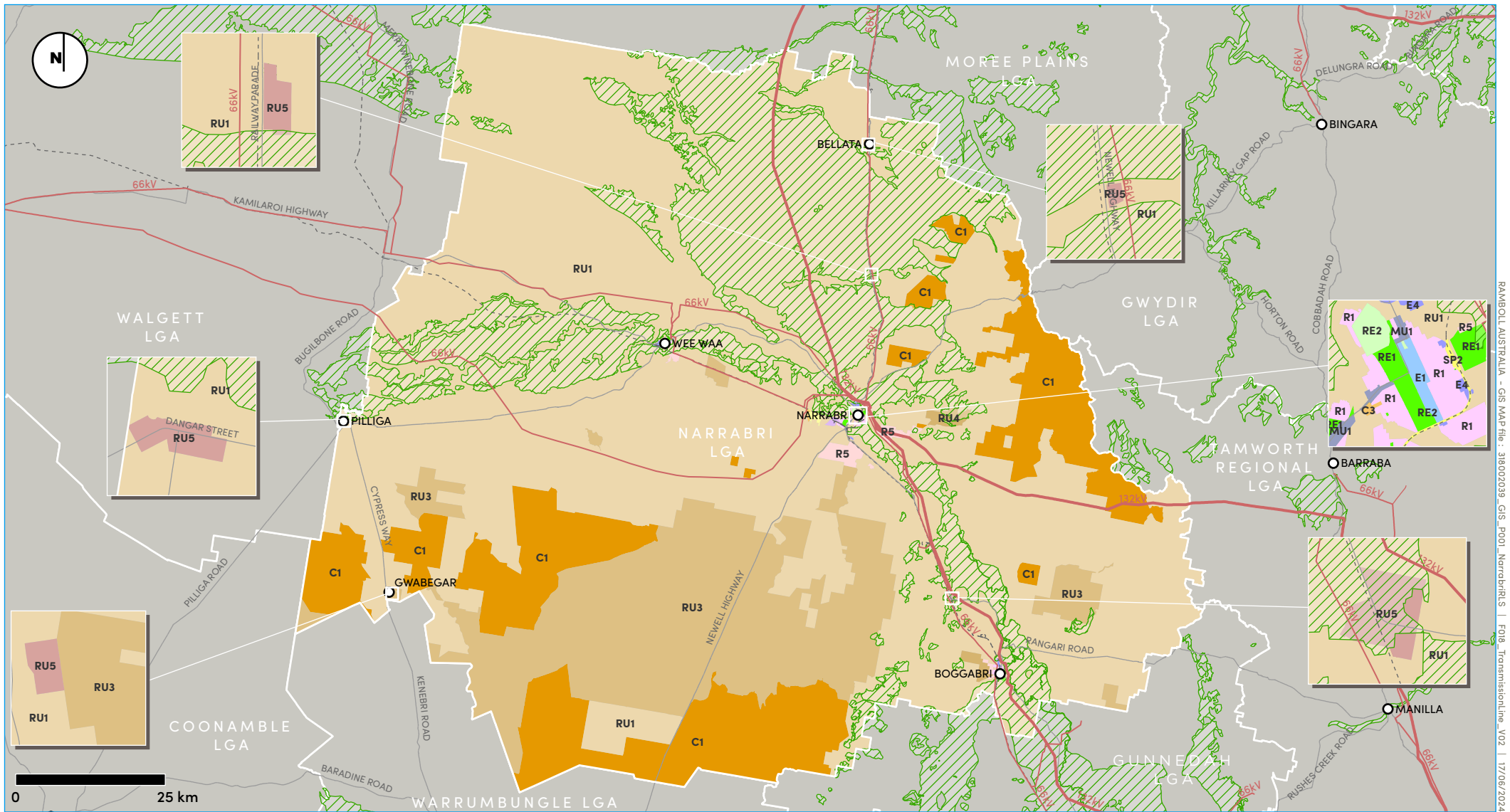
A stronger position in the renewable energy sector will support a diverse economy in Narrabri, which in turn supports a range of uses that co-benefit from locating in the area. While supporting growth in renewable energy sector and providing adequate infrastructure, it is important to protect productive agriculture land, so it is not consumed for non-agricultural uses. Figure 5 shows an overlay of where the transmission line is located and mapped BSAL areas.

## Objectives

- Encourage innovation, diversification and value-added agribusiness and non-agriculture industry where these uses complement agriculture and do not compromise productivity on important agriculture land.
- Support the green energy transition by identifying land for investigation for renewable energy production and related industries that avoids (as much as possible) BSAL areas.

## Recommended actions

- Develop industry specific growth strategies to support and encourage development of rural industry growth and value-add.
- Review permissibility of industrial, commercial, tourist and related land uses in the RU1 zone. The purpose is to expand the land uses that are permitted with consent in the RU1 zone, to include diversity of uses that reflect the potential value-add industries best suited to Narrabri rural lands.
- Consider proposed large scale industry on a case by case basis, with due consideration of avoiding fragmentation of rural land, minimising land use conflict risks and site suitability.
- Investigate agribusiness, agritourism and other rural-based tourism opportunities within the LGA as a part of the broader Economic Development Strategy.
- Investigate compatible areas for renewable energy land uses to protect productive agriculture lands. This includes collaboration with TransGrid and Essential Energy to understand the capacity and connections to the existing transmission lines within Narrabri and identify locations for renewable energy and development, where the priority is to avoid BSAL mapped areas.
- Review local planning controls to enable development opportunities for renewable energy industries in rural areas.
- Investigate potential future land uses of mining land, including restoration of the environment and biodiversity.
- Identify potential sites and prepare guidelines for locating processing and packaging/value add land uses within Narrabri Shire, giving regard to the extensive work undertaken as part of Narrabri Place Strategy.



RAMBOLL AUSTRALIA - GIS MAP FILE : 318002039 - GIS\_P001 - Narrabri.rhrs | F018 - TransmissionLine\_V02 | 17/06/2024

<b>Legend</b>				<b>A4</b>
LGA boundary	<b>LEP zoning (DPHI)</b>	RU5 - Village	R1 - General Residential	Railway Road
Biophysical Strategic Agricultural Land (DPHI)	<b>Rural land zones</b>	C1 - National Parks and Nature Reserves	R5 - Large Lot Residential	
<b>Electricity transmission line (NSWSS)</b>	C3 - Environmental Management	<b>Other zones</b>	RE1 - Public Recreation	
132kV	RU1 - Primary Production	E1 - Local Centre	RE2 - Private Recreation	
66kV	RU3 - Forestry	IN1 - General Industrial	SP1 - Special Activities	
33kV	RU4 - Primary Production Small Lots	MU1 - Mixed Use	SP2 - Infrastructure	

Figure 5 : Electricity transmission lines in Narrabri



#### 4.2.2 Principle 5: Support transition to new technologies and research

##### Opportunities and challenges

Narrabri is unique compared to other neighbouring LGA's when looking at the number of educational centres and institutes in the Shire. The University of Sydney, Plant Breeding Institute has been identified as a significantly important site not only for the continued research and support that it provides the Narrabri agriculture industry but more broadly its aim to train the next generation of plant breeders/geneticists and scientists. Council's Economic Development Strategy also recognises the importance of this facility in maintaining the Shire's diverse, resilient and sustainable modern economy by including an action for collaboration with the University to explore campus expansion opportunities for the I.A Watson Grain Research Centre to attract more students to the Shire.

The Plant Breeding Institute has undertaken crop breeding and research in Narrabri since 1973 to support a resilient Australian agricultural industry through knowledge and technology (The University of Sydney n.d.-b). One of the research projects has been on New Indian mustard, where the Institute has bred new variants of the seed that are more resilient and productive. The research has found that New Indian mustard has proven efficacy in the pharmaceutical industry and as a bio-lubricant, bioplastic and biofuel making it much more than a food product but instead a crop that offers strong agricultural and industrial opportunities as well as businesses and job growth.

During the Tinderbox Drought in 2017-2019 (The ARC Centre of Excellence for Climate Extremes 2024), the Plant Breeding Institute experienced that their Indian mustard plots were thriving during the dry and hot conditions whereas their canola crops on the same land were thirsty and had unsuccessful productivity. It indicated that New Indian mustard could survive even the harshest climate conditions, and that commercial significant tonnages of

seed could be produced from Indian mustard under harsh environmental conditions (Gluyas n.d.).

Further, the production of New Indian mustard is similar to production of conventional agriculture crops and the agriculture industry therefore won't need much transition to producing the new crops.



The University has also partnered with IA Watson Grains Research Centre and Llara/Campey farms. The Grains Research Centre is used for large-scale field trials, plant breeding, digital agriculture, weed and soil research as well as for teaching. The Llara/Campey farms are part of the Narrabri Farms Network and provides land for research and teaching (The University of Sydney n.d.-a). Besides the IA Watsons Grains Research Centre, Narrabri is also home to the Australian Cotton Research Institute and Cotton Seed Distributors, see Figure 7.

The different institutes and research centres in Narrabri have an important role in providing new research, technology and knowledge in the agriculture sector but also ensuring it is resilient for future climate changes and market trends. They provide opportunities for diversification with research in different types of grains and seeds, such as Indian mustards seeds, vertical integration and in water efficient cropping, preparing Narrabri to become more resilient towards climate change and more extreme weather patterns, such as longer periods of drought, flooding and high temperatures. Investment in new technology, research and types of crops is critical to ensure that Narrabri continues to keep its position as one of the leading Shires in knowledge on resilient and sustainable agriculture. Investment will not only be valuable for the agriculture sector in Narrabri, but more broadly across the whole sector. To recognise the importance and ensure the ongoing operation of research centres such as I.A Watsons Grains, protection of the land on which they operate and surrounding land is essential to avoid land use conflicts, enabling space for expansion and flexibility for further research in the field. This is proposed to be done through the introduction of a designated buffer within the Narrabri LEP 2012.

### Objectives

- Recognise and enhance the importance of the research and education facilities, in particular the I.A Watson Grain Research Centre.
- Protect the operational environment of the I.A Watson Grain Research Centre.
- To control development near the I.A Watson Grain Research Centre.

### Recommended actions

- Include a designated buffer under a new 'additional local provision' in Narrabri LEP 2012 to protect the operational environment of the I.A Watson Grain Research Centre and prevent land use conflict with adjoining development.
- Review permissibility of research and development uses in the RU1 zone, with the view to including education establishments and similar land uses as permitted with consent in RU1 zone.



## 4.3 Environment and climate change

### 4.3.1 Principle 6: Build greater resilience to climate change and natural hazards

#### Opportunities and challenges

##### Climate change and natural hazards

Projected longer term changes in weather patterns due to climate change are likely to have significant impacts on the rural land and environment in Narrabri. The New England North West (NENW) Region is predicted to experience increase in average and extreme temperature events, bushfire risk, flooding and drought. Narrabri LGA is expected to see an increase in water demand, instances of heat stress, and loss of biodiversity due to increase in average and extreme temperatures and extended periods without rainfall. The agriculture sector is projected to have a decrease in productivity due to increases in average and extreme temperatures, drought, water scarcity and fire weather. Climate changes will inevitably lead to impacts on agriculture land with both a heightened risk of longer and more intense drought in the future together with lack of groundwater for intensive agriculture and industrial land uses. Changing weather patterns pose significant risks to rural areas, driving transitions in industries, increasing natural hazards, and creating new opportunities for resilient technologies and industries.

In 2017–2019 NSW experienced the worst drought over the historical record from the 1890s. In this period NSW temperatures were the warmest and rainfall was the lowest on record (NSW Department of Planning n.d.). The severe conditions during the drought resulted in declines to ground water levels and had significant impact on the agricultural sector effecting the economy and employment rate (Department of Regional NSW 2023) and led to farmers struggling with failing crops and providing water and food for their livestock. The extreme weather also had an impact on farmers and the community's general mental health causing an increase in stress and anxiety

due to financial stress and uncertainty about the future (Narrabri Shire n.d.-a). Projections of drier and hotter weather in the future could potentially decrease agricultural productivity, reduce output in the agriculture sector, alter breeding seasons for farm animals and change seasonal production and harvesting patterns of grains and feed for farm animals.

The drought from 2017–2019 underscored the susceptibility of agricultural land to climatic changes. However, it also revealed that, through research trials, specific native grains exhibited robust growth in extreme weather conditions, as observed in Narrabri. Meanwhile, Narrabri has also faced significant flooding events in recent years, including the latest one in 2022 (May and Touma n.d.), exposing the region to multiple climate-related risks. Both flooding and drought present major challenges due to their frequency and impact on both urban and rural communities.

There have been several studies prepared to define the flood risk from the Namoi River and its minor tributaries such as Mulgate Creek and Long Gully. It is understood at the time of writing this Report that further investigations and updates to the 2016 flood studies and their implementation are underway. It is recommended that the outcomes of the flood studies be applied to rural land, particularly in relation to RU1 Primary Production zoned land within and surrounding Narrabri town., to ensure flood sensitive development does not occur in a flood planning area.

Climate change is an ongoing challenge for all communities and will likely have future impacts on health of biodiversity, water resources and security, primary production, landscape, infrastructure as well as rural and urban communities. Despite the challenges, climate change presents opportunities for new rural activities, such as carbon capture, renewable energy and further research in resilient agriculture.

##### Native grains

Narrabri is known for its rich and fertile cropping, but almost all the native grasslands have been removed for cropping or grazing, which have led to

significant plant breeding and farming research to increase the performance. With changes in weather and Narrabri experiencing longer periods of drought, there is great potential for reintroducing production of native grains as part of the agriculture sector due to their drought tolerance. The conventional industrial agriculture sector produces food and other commodities in large quantities where both the quality and price need to match the economic markets. However, when poor agricultural practices are used, they can have large impacts on the environment such as risk of contamination of surrounding land and waterways from runoff of chemical residues as well as be water-intensive (The University of Sydney 2023).

Being more resilient to changing weather patterns, the agriculture sector needs to adjust into a more sustainable way of production that seeks to minimise the impact of farming on the environment. This includes methods that reduce water use and soil disturbance and limit use of fertilisers and need for pest and weed control. The reintroduction of native grains through an agricultural or horticultural setting is a valuable way of using the environment in a sustainable way. The majority of native plants are resilient to some of the challenges the agriculture sector is facing with climate changes, by having adapted to low nutrient soils which means that they require fewer nutrient inputs as fertilisers, as well as adapted to the low seasonal rainfall by developing a root system with tap roots that can access deep soil water reserves while shallow roots can access the periodic rainfall (The University of Sydney 2023).

There is great potential in actively reintroducing native grains to the natural environment and the commercial agriculture sector in Narrabri to make the sector more sustainable and resilient as well as contribute to Narrabri's economy, particularly due to existing research and educational facilities. Reintroducing native grains will further lead to opportunities of providing educational facilities and job opportunities for First Nations people and be well adapted to the changing climate conditions in Narrabri, building resilience into the grains industry.

### Water security

Narrabri is located in the centre of Namoi Valley and the Namoi River runs through the Shire supporting agriculture, industries and communities. Namoi River runs from north west to south east, with the floodplain drained by a number of smaller tributaries including Mulgate Creek, Horsearm Creek and Long Gully (WRM Water & Environment 2016).

The agriculture sector will require secure water supply to sustain existing and future production within Narrabri. A lack of water supply during drought conditions adds pressure on agriculture industries and practices. As climate changes are expected to get worse, water demand will increase and water security planning will be critical to support communities in Narrabri, as well as maximise opportunities for efficient water use and to support sustainable growth and development in the rural areas.

Land use in catchments and waterways need to be managed appropriately to ensure that a range of values are not compromised, including water quality, environment, landscape and land uses such as agriculture, recreational activities and urban uses such as domestic water supply. Insuring water security will become more crucial and impose challenges in the future due to more extreme weather with rising temperatures and natural hazards risks such as drought.

Water sharing plans prescribe how water is managed in NSW, and priorities for the environment and support social and economic outcomes. DPHI reviewed the Water Sharing Plan for the Namoi and Peel Unregulated River Water Sources 2012 in June 2023 (NSW Government Natural Resources Commission n.d.), and the plan is extended till 1<sup>st</sup> July 2025 before it is renewed (The Courier n.d.). Water sharing plans are integral for irrigation from Namoi River to sustain agricultural activities in Narrabri.

### Objectives

- Promote measures to improve climate change resilience for rural land and the agricultural sector in Narrabri
- Consider impacts of climate change in local policy and decision making.

### Recommended actions

- Work with the Department of Climate Change, Energy, the Environment and Water to prepare an Action Plan for future impacts of climate change on rural areas, including emergency response to natural disasters.
- Engage and work collaboratively with NSW Government to educate rural communities on climate change risks and mitigation measures to ensure they are resilient to changing climate conditions.
- Collaborate with key government agencies and stakeholders to plan and manage water security for rural land uses.
- Support educational and research centres to explore new technologies, regenerative agriculture and sustainable land management.
- Ensure areas mapped as flood plain areas in *Narrabri Floodplain Risk Management Study and Plan* are protected when planning for urban and rural residential areas.
- Support research facilities to ensure that the agriculture sector is innovative and resilient to market and climate changes.

#### 4.3.2 Principle 7: Protect and enhance biodiversity, landscape and heritage

### Opportunities and challenges

Narrabri Shire is characterised by its distinctive rural scenery which includes prominent features such as Mount Kaputar National Park, the Pilliga Nature Reserve, the Namoi River, and agricultural land. The different key assets are home to native vegetation and diverse biodiversity, which is essential for overall health of living environment by improving soil stability, water quality, and the productivity of farm enterprises while protecting native flora and

wildlife. Native vegetation has been significantly reduced and modified since European settlement, and most native vegetation is found in national forests and parks, as well as Crown land.

Landscape protection is a vital component of future rural land use planning and economic directions and is a key attraction to investment and driver for future employment opportunities of tourism and agriculture. Further, improved management of the natural environment and land activities are required to address climate change, land use changes and other growth issues, while maintaining a healthy natural environment.

### Objectives

- Protect, restore and manage landscape, biodiversity and native vegetation sustainable.
- Recognise and protect First Nations cultural heritage within rural areas.

### Recommended actions

- Ensure that the scale and design of non-agricultural development on rural lands consider its surroundings and respect the rural character and local landscape.
- Protect and conserve biodiversity values and connect and restore habitat and ecosystems in rural land uses through developing an evidence-based, local planning framework.



#### 4.4 Recommended actions

The table below summaries the recommended actions for each planning principle. The planning principles will be collaborative between Council, DPHI and other stakeholders as necessary and is divided into different timeframes – ongoing, short term and medium term. The timeframes provide Council with a checklist to prioritise the recommended actions in their future work within rural land.

Planning principle	Recommended actions	Timing
1. Protect productive agriculture land	Identify the opportunities and constraints of BSAL, SSAL and IAL land, when all mapping is available, with a view to applying RU1 Primary Production zone to protect and sustain their value for future rural productivity.	Short term
	Review dwelling entitlements in RU1 Primary Production Zone to avoid changes to minimum lot sizes for land that create additional dwelling eligibilities and rezone land near Narrabri town for rural residential where demand is evident.	Ongoing
	Maintain Narrabri LEP 2012's 100ha and 40ha minimum lot size within the RU1 and RU4 zones.	Ongoing
	Establish development controls to ensure all new dwellings located on rural land do not compromise Important Agricultural Land (IAL), BSAL, scenic amenity and agricultural activities.	Short term
	Strengthen development controls to discourage dual occupancy development on RU1 land.	Short term
2. Minimise land use conflicts	Minimise subdivision of rural land unless it improves agricultural productivity or retains agricultural land.	Ongoing
	Remove holdings provisions via a two-year sunset provision into the LEP. The sunset clause will enable information to be communicated to the community and provide the opportunity to enquire about dwelling entitlements prior to the proposed changes coming into force.	Short term
	Support the <i>Right to Farm Act 2019</i> and the <i>Right to Farm Policy 2015</i> , which support farmers to undertake lawful agricultural practices without conflicts and complaints from neighbours and other land uses.	Long term
	Require intensive agriculture, plant agriculture and other non-agriculture land uses to apply the NSW DPI 'Land Use Conflict Risk Assessment Guide' as part of the development application process, to demonstrate the use will not unreasonably limit the operation of existing agriculture and related industries nor restrict the potential future use of productive agriculture land.	Ongoing
	Support opportunities for intensive livestock agriculture in suitable locations and avoid encroachment of sensitive receptors.	Ongoing
	Manage biosecurity such as invasive species control, pest controls and preparing for future biosecurity emergencies.	Ongoing
	Work with relevant stakeholders to educate landholders to their general biosecurity obligations as outlined in <i>Biosecurity Act 2015</i> .	Ongoing

Planning principle	Recommended actions	Timing
3. Enhance opportunities for First Nations people	Narrabri Shire Council work more closely with the Narrabri LALC to build capacity and share knowledge about Aboriginal land and the opportunities to support the aspirations of Aboriginal people and communities.	Ongoing
	Develop a register and portfolio of First Nations Primary and Agricultural Industries case studies.	Short term – Medium term
	Use mapping systems to identify and analysis opportunities for primary production on underutilised Narrabri LALC and Crown land.	Short term – Medium term
4. Encourage diversification of rural economy	Develop industry specific growth strategies to support and encourage development of rural industry growth and value-add.	Short term – Medium term
	Review permissibility of industrial, commercial, tourist and related land uses in the RU1 zone. The purpose is to expand the land uses that are permitted with consent in the RU1 zone, to include diversity of uses that reflect the potential value-add industries best suited to Narrabri rural lands.	Short term
	Consider proposed large scale industry on a case by case basis, with due consideration of avoiding fragmentation of rural land, minimising land use conflict risks and site suitability.	Ongoing
	Investigate agribusiness, agritourism and other rural-based tourism opportunities within the LGA as a part of the broader Economic Development Strategy.	Ongoing
	Investigate compatible areas for renewable energy land uses to protect productive agriculture lands. This includes collaboration with TransGrid and Essential Energy to understand the capacity and connections to the existing transmission lines within Narrabri and identify locations for renewable energy and development, where the priority is to avoid BSAL mapped areas.	Ongoing
	Review local planning controls to enable development opportunities for renewable energy industries in rural areas.	Short term
	Investigate potential future land uses of mining land, including restoration of the environment and biodiversity.	Medium term
	Identify potential sites and prepare guidelines for locating processing and packaging/value add land uses within Narrabri Shire, giving regard to the extensive work undertaken as part of the Special Activation Precinct/Inland Port project.	Short term
5. Support transition to new technologies and research	Include a designated buffer under a new ‘additional local provision’ in Narrabri LEP 2012 to protect the operational environment of the I.A Watson Grain Research Centre and prevent land use conflict with adjoining development.	Short term
	Review permissibility of research and development uses in the RU1 zone, with the view to including education establishments and similar land uses as permitted with consent in RU1 zone.	Short term

Planning principle	Recommended actions	Timing
6. Build greater resilience to climate change and natural hazards	Work with the Department of Climate Change, Energy, the Environment and Water to prepare an Action Plan for future impacts of climate change on rural areas, including emergency response to natural disasters.	Short term
	Engage and work collaboratively with NSW Government to educate rural communities on climate change risks and mitigation measures to ensure they are resilient to changing climate conditions.	Ongoing
	Collaborate with key government agencies and stakeholders to plan and manage water security for rural land uses.	Ongoing
	Support educational and research centres to explore new technologies, regenerative agriculture and sustainable land management.	Ongoing
	Ensure areas mapped as flood plain areas in <i>Narrabri Floodplain Risk Management Study and Plan</i> are protected when planning for urban and rural residential areas.	Ongoing
	Support research facilities to ensure that the agriculture sector is innovative and resilient to market and climate changes.	Ongoing
7. Protect and enhance biodiversity, landscape and heritage	Ensure that the scale and design of non-agricultural development on rural lands consider its surroundings and respect the rural character and local landscape.	Ongoing
	Protect and conserve biodiversity values and connect and restore habitat and ecosystems in rural land uses through developing an evidence-based, local planning framework.	Short term – Medium term

## 5. Implementation

### 5.1 Monitoring and reviewing

The Strategy provides a framework for Narrabri's rural land over the next 20 years. Narrabri Shire Council will monitor and review the Strategy to ensure that it responds to changes in planning policies, legislations, industry requirements and community expectations. It is most likely that the characteristics of Narrabri, its community, the environment and rural land industries will continue to change over time. This is both a result of growth, effects of climate change, new research and technology, as well as change in demands. To ensure the Strategy is meeting changing demands, it will be reviewed at four yearly intervals to ensure that land use standards enable a productive agricultural sector and respond to new and emerging opportunities in a timely manner.

### 5.2 Implementation

The Strategy will be implemented by Council progressively over the next 20 years and establish future directions for rural land in Narrabri. The intent of the Strategy is to set a broad direction for Council and help guide future planning decisions related to rural land, agriculture, mining, tourism and other industries.

The Strategy should be seen as a core reference document, particularly in relation to informing planning decisions and in engaging relevant stakeholders on a range of challenges and opportunities.

The Strategy identifies a range of recommended actions that will be prioritised. The recommended actions will help guide Council's decision making in planning for rural land.

Narrabri LEP 2012 and Council's DCPs, along with other associated strategies, plans and policies, will ensure that development of rural lands is consistent

with the long-term land use vision and guiding principles and recommended actions identified in the Rural Land Strategy.

The next steps involve:

- Consultation with the relevant NSW government departments, including (but not limited to):
  - Department of Planning, Housing and Infrastructure
  - Department of Primary Industries
  - Water NSW
  - Transport for NSW
- Consultation with landowners, the stakeholders and the community, including (but not limited to):
  - Local Land Services
  - Local Aboriginal Land Council.
- Following consultation review of submissions and feedback being undertaken.





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