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NSW GOVERNMENT | Planning, Industry & Environment

Jindera Residential Land Use Strategy

draft

March 2021

prepared for

Greater Hume Council

Greater Hume Council

Acknowledgement

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1.0 Introduction

1.1 Overview

The township of Jindera has been experiencing sustained and ongoing population growth in recent times, due in part to its close proximity to the larger regional centre of Albury-Wodonga and the comparatively lower land prices and alternative lifestyle opportunities that this township provides.

In response to this growth, this document provides a strategy for the future residential growth and development of the Jindera township for the next 20-30 years.

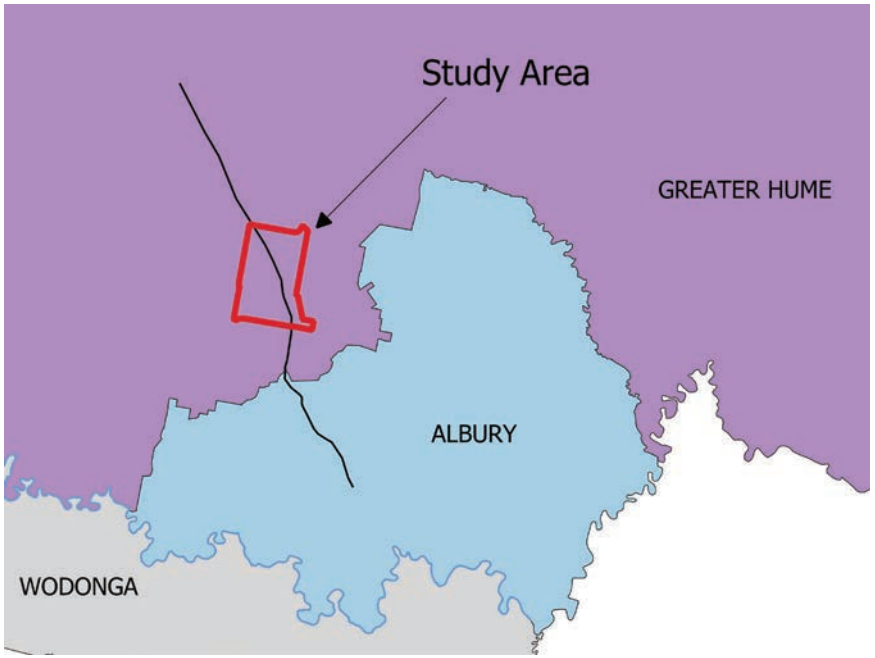

Figure 1 - Site Context Plan

1.2 Purpose

The *Jindera Residential Land Use Strategy* ("the Strategy") provides the strategic framework and vision to guide the future residential growth of Jindera.

Specifically, the Strategy seeks to achieve the following:

- Background review of all relevant policies, strategies and reports for the township of Jindera that have informed the growth of the town to date;
- Undertake a constraints and opportunities analysis of land within Jindera to identify land that is suitable for future residential opportunities;
- To cater for the residential needs of the community and identify appropriate residential densities that reflect the environmental and servicing constraints of the land, whilst avoiding land use conflicts with existing developments;
- Identify infrastructure and servicing capacities and constraints;
- Identify areas of environmental significance and the implications this has for future development;
- Provide an implementation plan to outlined how the recommendations of this Strategy will be established.

1.3 Preparing the Strategy

The preparation of the Strategy has been undertaken in six stages (see Figure 2).

The project commenced in June 2020, with background research and document review of previous Council strategic planning strategies. Initial site investigations of the study area were also conducted during this first stage.

Stage 2 of the project involved Council seeking Expressions of Interest (EOI) from interested landowners seeking consideration of their land as part of the review.

Following this, an issues and opportunities analysis of the study area was undertaken to help identify land potentially suitable for future development or constrained by issues such as biodiversity significance. This Stage 3 involved both desktop assessment and fieldwork to determine appropriate candidate sites.

Upon completion of these investigations, the draft Strategy was prepared as part of Stage 4.

Stage 5 of the project consultation involved the formal public exhibition of the Strategy seeking feedback.

Stage 6 of the project involved refinements to the Strategy in response to written submissions. The final Strategy was adopted by Council on [to be completed].

Figure 2 - Project Timeline

1.4 Consultation

The preparation of the Strategy has been informed by stakeholder and community consultation. Specifically, the development has involved two phases of consultation, being:

- Expressions of interest from landowners
- Public exhibition of the draft Strategy.

The first consultation phase involved Council seeking Expressions of Interest (EOI) from interested and affected landowners seeking consideration of their land for inclusion in the Strategy prior to preparation and confirmation of the boundaries of the study area.

Responses received during this stage included written responses via email to both Council and the project consultants. Consultation was also undertaken at this stage with relevant government agencies and service providers.

The second phase consultation involved formal public exhibition of the draft Strategy.

The objective of this consultation process was to seek community feedback on the draft recommendations of the Strategy, which will inform the final Strategy document.

2.0 Study Area

The area investigated by the Strategy comprises the main urban area of Jindera and the surrounding area as shown in Figure 3.

The Study Area is generally defined by Dunwandren Lane and Wehner Road to the north, Vine Drive to the east, Hueske Road to the south and a Council Road Reserve and Kingston Hill to the west.

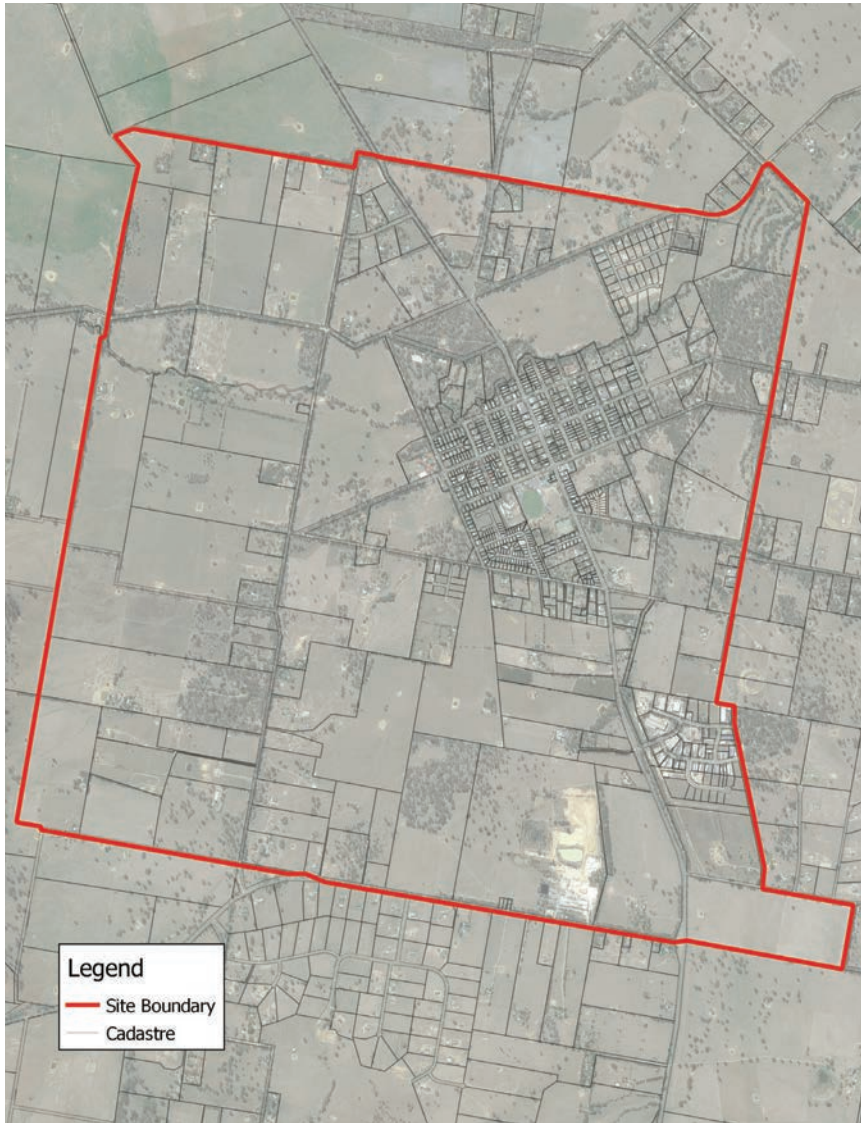

Figure 3 - Study Area

3.0 Demographic and Land Use Context

3.1 Demographics

This demographic analysis is based on the 'Jindera State Suburb' as defined by the Australian Bureau of Statistics (ABS). The data used in this analysis has been sourced from *ABS 2006-2016 Census of Population and Housing* via the ABS.

It is noted that population figures using this definition of Jindera includes all land within the main urban area of Jindera and surrounding lands generally within a 5 kilometre radius of this main urban area. This includes the large lot residential estate 'Glenholm Estate' and the low density residential subdivision 'Pomegranate Estate'.

The population of Jindera at the 2016 Census was 2,222.

In December 2020, the estimated population of Jindera was 2,609 persons based on previous population growth rates, dwelling approval and occupancy rates.

Population figures and growth rates for Jindera are summarised in Tables 1 and 2.

Since 2006, Jindera has grown at an average annual rate of 3.44%. Since 2010, this annual population growth rate has increased to 4.46%.

Based on a forecast population growth rate of 4%, Jindera will grow to a population size of approximately 8,000 people by 2050.

Table 1 - Population Summary

Summary	2006	2011	2016	2020[1]
Population	1,624	1,809	2,222	2,609
Change in population (5 years)	--	+185	+413	+387
Average annual change	--	2.28%	4.57%	4.35%
Dwellings	566	662	776	869
Average household size	3.0	2.9	2.9	3.0
Occupancy rate	0.94	0.95	0.93	0.92

Source: Australian Bureau of Statistics Census of Population and Housing

Table 2 - Jindera Population Projections

2006	2011	2016	2021	2026	2031	2036	2041	2046	2051
1,624	1,809	2,222	2,678	3,215	3,855	4,629	5,560	6,672	8,010

3.2 Supply and Demand Analysis

Residential Demand

Demand for vacant residential land is directly related to the number of new dwellings that are constructed.

178 new residential dwellings have been constructed in Jindera since 2015 according to Council's Development Application and Complying Development Certificate register as summarised in Table 3.

On average, this equates to a demand for approximately 30 new residential dwellings per annum since 2015.

Since 2018, this figure has increased to an average of 35 dwellings per annum reflecting recent growth trends.

These dwellings have been constructed across a number of different land use zones including conventional urban lots (RU5 Village Zone) up to small scale hobby farms (RU4 Primary Production Small Lots).

The most popular residential lot type in Jindera is the RU5 zone, which equates for approximately 36% of all total dwellings. Demand has also been strong for low density residential lots (26%) and large lot residential properties (24%), which have a minimum lot size ranging from 2,000m^2 up to 8 hectares.

Based on current household occupancy rates and population forecasts outlined in Section 1.1 above, a total of 1,801 new dwellings will need to be constructed in Jindera to service this forecast population growth as outlined in Table 4.

This equates to an average of 58 new dwellings each year.

Table 4 - Projected Number of New Dwellings

2021	2026	2031	2036	2041	2046	2051
893	1,072	1,285	1,543	1,853	2,224	2,670

Table 3 - Number of New Dwellings Constructed by Zone

Zone	2015	2016	2017	2018	2019	2020	Total	Percentage
RU5 Village	9	13	10	6	10	17	65	36.5%
R2 Low Density Residential	3	3	7	15	8	11	47	26.4%
R5 Large Lot Residential	3	9	4	6	7	13	42	23.6%
RU4 Primary Production Small Lots	5	4	4	3	2	6	24	13.5%
Total	20	29	25	30	28	46	178	100%

Source: Greater Hume Council, Development Application and COmplying Development register dated 11 December 2020

Residential Land Supply

An analysis of residential land supply has been used to determine how much residential land is currently available for consumption.

For the purposes of this assessment, a lot is considered to be 'vacant' where it does not contain a dwelling as at 29 August 2020 or has not been sold.

In addition, a further assessment has been undertaken of all undeveloped vacant residential zoned land to determine how much additional residential zoned land is still available for development.

Figure 4 identifies all the current residential zoned land (both developed and undeveloped) in Jindera.

Table 6 provides an analysis of the current supply of residential zoned land available for Jindera.

Based on this analysis, Jindera has an approximate 12 years supply of residential zoned land based on an average take-up rate of 30 dwellings per annum since 2015.

When considering the population projections outlined in Table 3 above and using the average take-up rate of 35 dwellings per annum since 2018, the level of residential land supply is reduced to approximately 10 years.

Using the figures outlined in Tables 2 and 6, there is a significant shortfall in R5 Large Lot Residential zoned land with only approximately 4 years worth of supply remaining as outlined in Table 5.

Table 5 - Residential Land Supply Summary

Summary	Land Supply	Demand (new homes p.a.)	Years Supply
RU5 Village (600m^2)	122	11	11
R2 Low Density Residential (2,000-4,000m^2)	197	11	17.9
R5 Large Lot Residential (2ha+)	34	9	3.7
Total	353	30	11.76

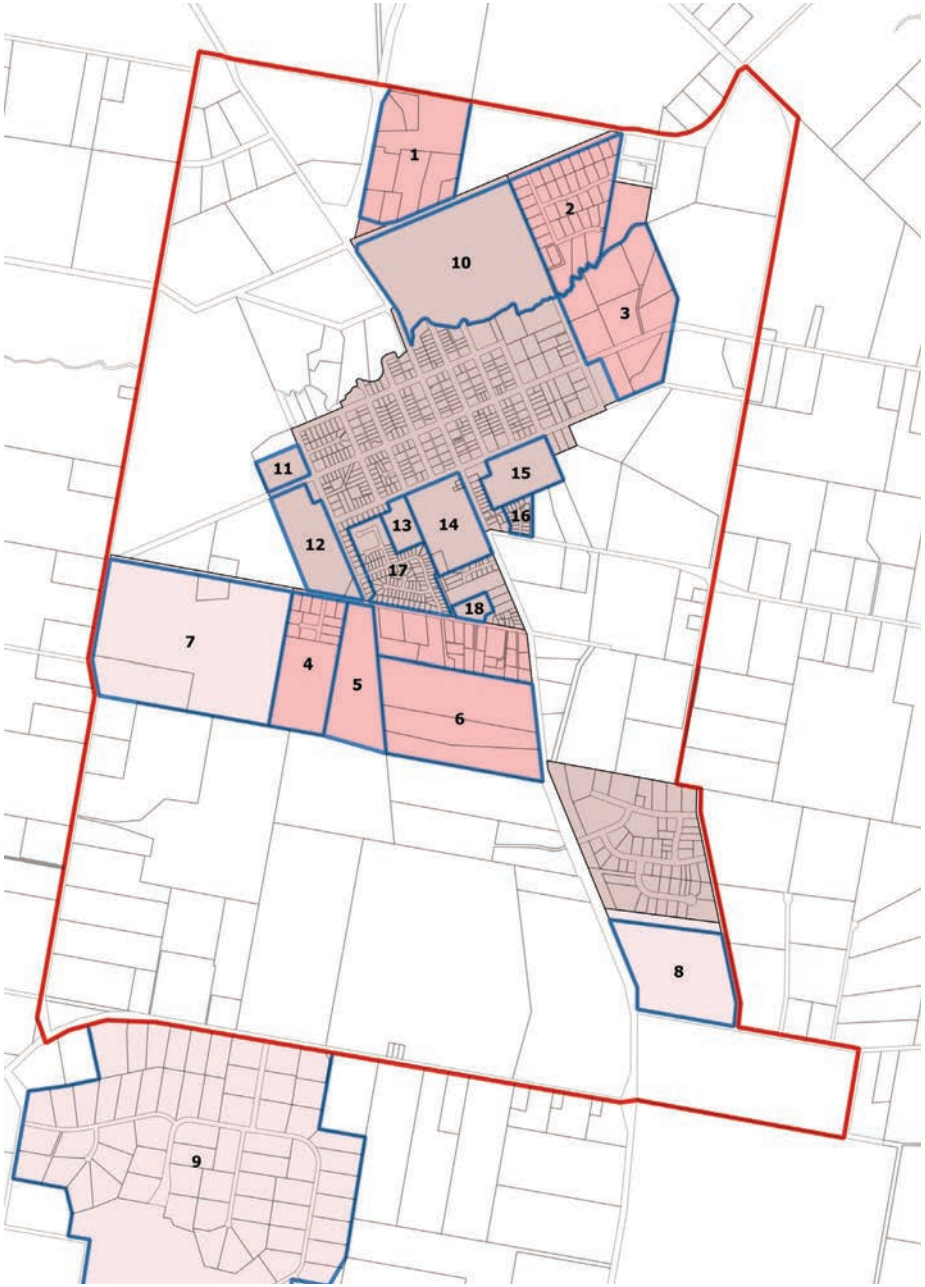

Figure 4 - Residential Land Supply Map

Table 6 - Residential Land Supply

Ref No.	Name/Address	Minimum Lot Size	Area (ha)/Approved Number of Lots	Comment	Vacant Land Supply (lots)*
R2 Low Density Residential					
1.	Drumwood Road (north)	4,000m^2	23ha comprising 10 individual allotments	Existing low density residential subdivision that has already been developed. An opportunity does exist to further subdivide this land based on land zoning and minimum lot size requirements, although due to the current lot configuration and location of roads, future development opportunities are limited.	10
2.	'Pomegranate Estate'	4,000m^2	41 approved lots	Subdivision fully constructed with 34 of the 41 lots built upon. Of the remaining 7 undeveloped lots, all have been sold.	0
3.	Dights Forest Road (north)	4,000m^2	26ha comprising 9 individual allotments	Existing low density residential subdivision that has already been developed. An opportunity does exist to further subdivide this land based on land zoning and minimum lot size requirements, although due to the current lot configuration and location of roads, future development opportunities are limited.	10
4.	'Pioneer Park Estate'	2,000m^2	12 approved lots with balance of property to be developed.	12 lots constructed in stage 1 with an additional 8 lots to be built in stage 2. Of the 12 lots constructed, 4 have been built upon.	16
5.	'Heritage Park'	2,000m^2	53 approved lots	Recently approved subdivision comprising 53 lots. Stage 1 comprising 22 lots was constructed in mid-late 2020. Of these, 18 lots have been sold or are on hold.	35
6.	Jindera South Master Plan Area (balance)	2,000m^2	126 (approx.)	The number of future lots within this area has been based on the recommendations of the Jindera South Low Density Residential Master Plan 2016 (see Section 3.2.2 below for further details)	126
R5 Large Lot Residential					
7.	187-313 & 315-323 Pioneer Drive & 81 Bungowannah Road	2ha	56ha	Indicative number of future large lot residential lots that could be achieved based on current lot configuration, minimum lot size and accounting for the provision of infrastructure and services such as roads and drainage (minus 20% of total site area).	22
8.	32 Jarick Way (south of Jindera Industrial Estate)	4,000m^2	20ha	Vacant large lot residential zoned parcel of land. Council however have recently prepared a planning proposal to rezone this property industrial. For this reason no residential land supply has been indicated for this property.	0
9.	Glenholm Estate	2ha	73 approved lots	Large lot residential subdivision comprising 73 lots. Last stage of Glenholm Estate yet to be constructed with most lots now developed or sold. Of the total number of lots, only 12 remain unsold.	12

Ref No.	Name/Address	Minimum Lot Size	Area (ha)/Approved Number of Lots	Comment	Vacant Land Supply (lots)*
RU5 Village					
10.	1292 Urana Road/ Drumwood Road Jindera Crown Lands	600m^2	38ha	Vacant village zoned parcel of land that is largely unconstrained and highly suitable for conventional residential development (approx. 280 lots). However, the property is Crown Land and is unlikely to become available for development in the short to medium term. For this reason, no residential land supply has been indicated for this land.	0
11.	St Johns Lutheran Primary School	600m^2	3ha	No further development opportunity as property has been developed for a primary school.	0
12.	214-224 Pioneer Drive (corner of Jindera Street)	600m^2	11ha	Undeveloped residential zoned parcel of land available for development. It is noted that the development potential of this land is constrained, particularly in the southern portion due to the biodiversity offsetting requirements. A portion of the property is also flood prone.	45
13.	Jindera Public School	600m^2	3ha	No further development opportunity as property has been developed for a primary school.	0
14.	Jindera Recreation Reserve	600m^2	11ha	No further development opportunity as property has been developed as a a multi-faceted recreation reserve.	0
15.	71-91 Dight Street	600m^2	8ha	Undeveloped residential zoned parcel of land available for development. However, the development potential of this land is constrained, particularly in the south east corner due to the biodiversity offsetting requirements.	30
16.	Cade Court Subdivision	600m^2	16 approved lots	Recently approved and constructed residential subdivision.	3
17.	Pech Avenue Estate	600m^2	99 approved lots	Recently approved and constructed residential subdivision. Last stages of residential subdivision still to be constructed.	39
18.	116-120 Pioneer Drive	600m^2	2ha	Undeveloped residential zoned parcel of land available for development. However, the development potential of this land is limited due to the biodiversity offsetting requirements.	5
					Total = 353

3.3 Planning Policy Framework

This section of the Strategy addresses the current statutory and strategic planning framework within which the future development of Jindera will occur.

3.3.1 Statutory Planning

The relevant local and state statutory planning framework as it applies to Jindera is discussed below:

State Environmental Planning Policies

State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 ("the Codes SEPP") sets out exempt and complying development codes for a variety of residential, commercial and rural development. The Codes SEPP allows development which is of minimal environmental impact to be carried out without the need for development consent, and those types of complying development that may be carried out in accordance with a complying development certificate. It is understood that a large proportion of residential dwellings are approved via the Codes SEPP in Greater Hume, which is expected to continue with the future development of the study area.

State Environmental Planning Policy (Infrastructure) 2007 ("SEPP Infrastructure") provides a consistent planning regime for infrastructure and the provision of services across the state. It also sets out a framework for consultation with relevant public authorities regarding infrastructure development and proposals affecting state infrastructure. Subdivision 2 of Division 17 of the SEPP refers to development in or adjacent to road corridors and road reservations.

Urana Road is identified as a classified road pursuant to the *Roads Act 1993*, and therefore future development alongside this road will be required to consider SEPP Infrastructure. Clause 101 of this part sets out the matters that a consent authority must take into consideration when determining an application for development with frontage to a classified road. Clause 104 also sets out the types of development which must be referred to the NSW Roads and Maritime Service for comment.

State Environmental Planning Policy No. 55 – Remediation of Land ("SEPP 55") sets out considerations relating to land contamination across the state. The intention of the SEPP is to establish 'best practice' guidelines for managing land contamination through the planning and development control process.

In the context of future development applications, clause 7 of SEPP 55 requires that consideration be given to whether or not land proposed for development is contaminated and fit for use for its intended purpose.

Section 9.1 Ministerial Direction 2.6 also requires Council to consider whether land is contaminated and whether it is fit for its intended purposes, whether in its current contaminated state or after remediation.

State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017 aims to protect the biodiversity and amenity values of trees and other vegetation in non-rural areas of the State.

The SEPP applies to vegetation in any non-rural area of the State that is declared by a Development Control Plan to be vegetation to which this SEPP applies. Therefore, future development involving tree removal will be required to consider the SEPP.

Ministerial Directions

When Council prepares a new LEP, it must have regard to the local planning Directions issued by the Minister for Planning (Ministerial Directions).

These Ministerial Directions cover the following broad categories:

- Employment and resources
- Environment and heritage
- Housing, infrastructure and urban development
- Hazard and risk
- Regional planning
- Local plan making

This Strategy seeks to accommodate these directions in forming its recommendations for the future residential growth of Jindera.

Local Environmental Plan

The Local Environmental Plan (LEP) contains the key planning provisions relating to development at the local level.

The main commercial, industrial and residential areas of the town are zoned RU5 Village, which provides for a range of land uses, services and facilities associated with a rural village.

Land surrounding this area is zoned R2 Low Density Residential and R5 Large Lot Residential, which seeks to provide for the housing needs of the community within a low density residential environment, as well as protecting the rural setting of surrounding lands (Figure 5).

Remaining areas of the study area are zoned RU4 Primary Production Small Lots, which provides a transition from urban to rural land uses.

The LEP also sets out prescribed Minimum Lot Sizes (MLSacross the Greater Hume area. MLS within the study area range from 600m2 in the central urban area up to 8ha in the peripheral areas (Figure 6). These lot sizes correspond to the zoning of the land and also reflect the environmental and servicing constraints of the land.

In addition, the township of Jindera is subject to a number of overlays and protection measures, including flood planning, terrestrial biodiversity, bushfire and heritage, which are further discussed in Section 4 of this report.

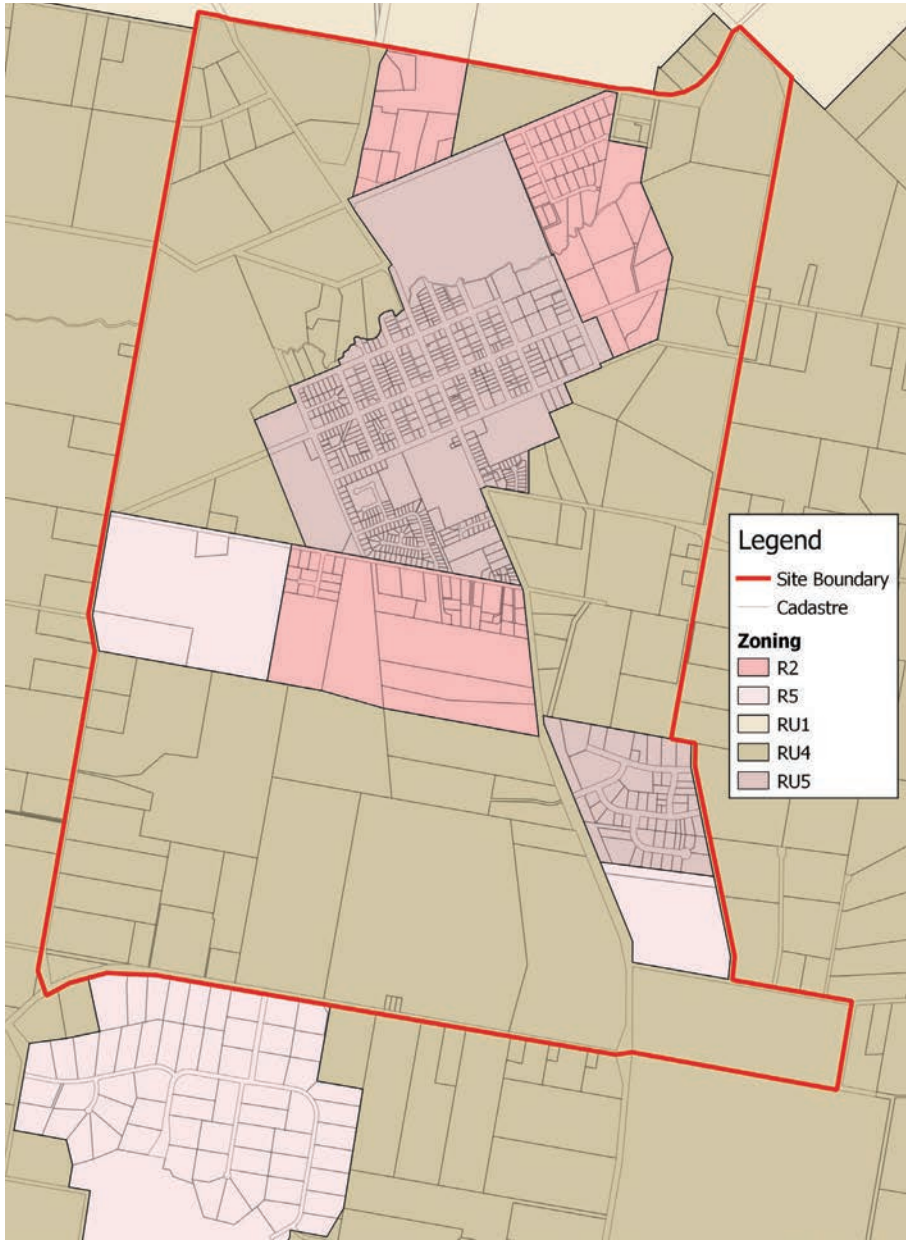

Figure 5 - Existing Land Zoning Map

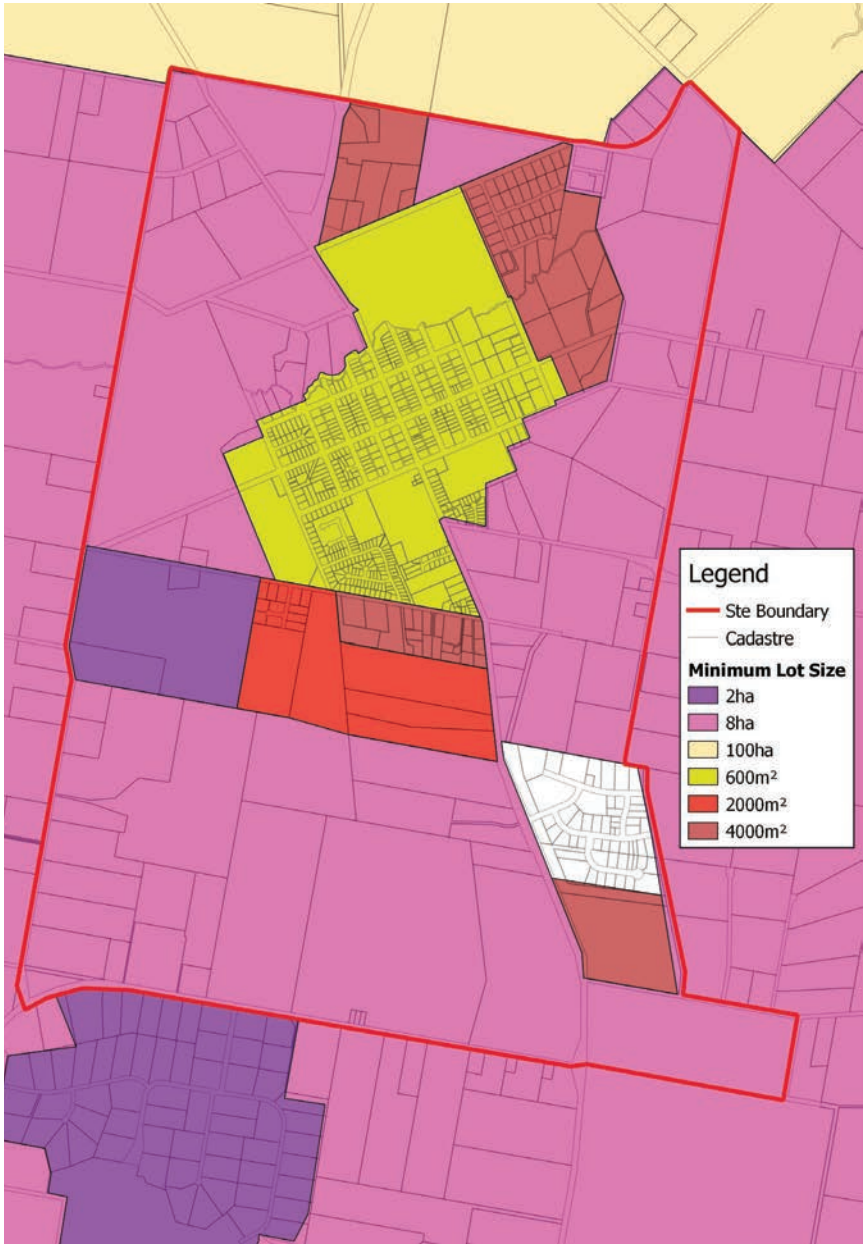

Figure 6 - Existing Minimum Lot Size Map

3.3.2 Strategic Planning

The relevant local and state strategic planning framework as it applies to Jindera is discussed below:

Riverina-Murray Regional Plan

The Riverina Murray Regional Plan (RMRP) is a 20-year blueprint for the future of the region.

The vision for the Riverina Murray region is outlined as follows:

> *to create a diversified economy founded on Australia's food bowl, iconic waterways and a strong network of vibrant and connected communities.*

To achieve this vision, the MMRP has set four goals for the region:

- Goal 1 – A growing and diverse economy
- Goal 2 – A healthy environment with pristine waterways
- Goal 3 – Efficient transport and infrastructure networks
- Goal 4 – Strong, connected and healthy communities

The Strategy achieves the relevant goals, directions and actions of the RMRP as outlined in Table 7.

Table 7 - Projected Number of Occupied Dwellings

Goal 1 - A Growing and Diverse Economy	
Direction 4: Promote Business activities in industrial and commercial areas.	• Action 4.3: Protect industrial land, including in the regional cities (Bomen, Nexus and Tharbogang) from potential land use conflicts arising from inappropriate and incompatible surrounding land uses.
Goal 2 - A Healthy Environment with Pristine Waterways	
Direction 15: Protect and manage the region's many environmental assets	• Action 15.1: Protect high environmental value assets through local plans. • Action 15.2: Minimise potential impacts arising from development in areas of high environmental value, and consider offsets or other mitigation mechanisms for unavoidable impacts
Goal 3 - Efficient Transport and Infrastructure Networks	
Direction 21: Align and protect utility infrastructure investment	• Action 21.1: Monitor development and ensure that infrastructure is responsive to investment opportunities.
Goal 4 - Strong, Connected and Healthy Communities	
Direction 22: Promote the growth of regional cities and local centres	• Action 22.1: Coordinate infrastructure delivery across residential and industrial land in the regional cities. • Action 22.2: Consider the role, function and relationship between regional cities and centres in local land use strategies.
Direction 25: Building housing capacity to meet demand	• Action 25.1: Prepare local housing strategies that provide housing choice and affordable housing. • Action 25.3: Align infrastructure planning with land release areas to provide adequate infrastructure.

Goal 4 - Strong, Connected and Healthy Communities	
Direction 27: Manage rural residential development	• Action 27.1: Enable new rural residential development only where it has been identified in a local housing strategy prepared by council and approved by the Department of Planning and Environment. • Action 27.2: Locate new rural residential areas: o in close proximity to existing urban settlements to maximise the efficient use of existing infrastructure and services, including roads, water, sewerage and waste services and social and community infrastructure; o to avoid or minimise the potential for land use conflicts with productive, zoned agricultural land and natural resources; o to avoid areas of high environmental, cultural and heritage significance, important agricultural land or areas affected by natural hazards. • Action 27.3: Manage land use conflict that can result from cumulative impacts of successive development decisions.
Direction 28: Deliver healthy built environments and improved urban design	• Action 28.2: Promote high-quality open spaces that support physical activity, including walking and cycling networks, in the design of new communities. • Action 28.3: Reflect local built form, heritage and character in new housing developments.
Direction 29: Protect the region's Aboriginal and historic heritage	• Action 29.2: Consult with Aboriginal people and the broader community to identify heritage values at the strategic planning stage. • Action 29.4: Recognise and conserve heritage assets that have community significance in local plans.

Greater Hume Local Strategic Planning Statement

The *Greater Hume Local Strategic Planning Statement* (LSPS) sets the land use framework on a local scale for Greater Hume Council's economic, social and environmental land use needs over the next 20 years. It addresses the planning and development issues of strategic significance to the Council through planning priorities and actions, spatial land use direction and guidance.

The LSPS gives effect to the *Riverina Murray Regional Plan 2036* implementing the directions and actions at a local level. It is also informed by other State-wide and regional policies including *Future Transport Plan 2056* and the *NSW State Infrastructure Strategy 2018 – 2038*.

The vision statement the LSPS outlines the following:

> *Greater Hume will continue to recognize the importance of the regional cities of Albury, Wodonga and Wagga Wagga and our community's ability to access higher level services, such as higher education, health services and employment. Recognising and enhancing this connection will be a key driver to the success of Greater Hume.*
>
> *Our towns and villages will capitalise on growth opportunities so that they continue to service our rural communities. Our towns will offer a variety of housing choice to retain the ageing population but will also provide an alternate rural lifestyle that will attract people to the area. As our towns continue to support new growth, our economic base will diversify. Our townships will be vibrant active places to visit and live providing a variety of basic economic and community services, within a rural heritage town setting, resilient to effects of climate change.*

Our natural environment will be fully understood and appreciated. Our existing environmental assets, national parks, river and water bodies will be leveraged off, and there will be an opportunity to connect these areas through biodiversity corridors. Significant environmental areas adjoining our development areas will be identified, understood and protected. Our new development areas will respect the environmental values and will also leverage off these features to make Greater Hume a great place to live and visit.

To achieve this 20-year vision for Greater Hume, Council has identified nine planning priorities to focus future strategic planning consistent with the recommendations of the RMRP and Council's Community Strategic Plan 2017-2030.

The Strategy is consistent with the following planning priorities:

Planning Priority One: Housing and Land Supply

The following recommendations of the LSPS are relevant in the context of the Strategy:

Monitor the uptake of residential land in the towns and villages and investigate future residential areas (as identified on the town maps). These areas will:

- *Be located to avoid areas that are identified as important agricultural land or areas that create potential for land use conflict;*
- *Align with the utility infrastructure network and its capabilities;*
- *Avoid or mitigate the impacts of hazards, including the implications of climate change;*
- *Protect areas with high environmental value and/ or cultural heritage value and important biodiversity corridors;*
- *Not hinder development or urban expansion and will contribute to the function of existing townships;*
- *Create new neighbourhoods that are environmentally sustainable, socially inclusive, easy to get to, healthy and safe.*

Investigate a mixture of smaller and larger residential lots in the towns and villages to create opportunity, respond to future demand, and to provide a range of housing options. This includes protecting areas west of Jindera for smaller residential lots.

The relevant action items listed under this Planning Priority include:

3. *Investigate and identify future opportunities to provided fully serviced large lot residential allotments and partially serviced rural residential allotment in Jindera – Short Term (refer plans)*
4. *For the RU4 zoning in Jindera and other townships investigate the feasibility of increasing the density within the RU4 zoning*

Planning Priority Three: Utility Infrastructure

The following recommendations of the LSPS are relevant in the context of the Strategy:

Align residential and commercial growth with water and waste water capabilities.

The relevant action items listed under this Planning Priority include:

1. *Complete an integrated water management plan to ensure future water and sewer aligns with future growth.*

Planning Priority Four: Agricultural Lands

The following recommendations of the LSPS are relevant in the context of the Strategy:

Protect important agricultural lands in local planning controls.

To avoid agricultural land fragmentation maintain the existing rural lands minimum lots size provisions in the Greater Hume Local Environmental Plans.

Manage land use conflict on agricultural land by:

- *In the case of nuisance complaints supporting pre-existing, lawfully operating agricultural land uses*
- *Avoid locating incompatible land uses in and adjacent to agricultural production areas*
- *Restrict the encroachment of incompatible land uses;*
- *Ensure that land use standards for minimum subdivision sizes in the LEP reflect trends and enable a productive agricultural sector*

Planning Priority Six: Supporting our Industries

The following recommendations of the LSPS are relevant in the context of the Strategy:

- *Support existing industrial land uses and precincts for freight and logistics, industry, warehousing and similar activities in locations that minimise amenity impacts.*
- *Investigate opportunities for the expansion of existing and new industrial precincts in our townships that do not impact on residents.*
- *Protect and recognise existing industrial precincts and uses to avoid any land use conflicts from future residential development*
- *Encourage the co-location of complementary industry alongside agricultural enterprises that enhance the efficiency of the agricultural land use.*

Planning Priority Eight: Identify and protect environmental values

The following recommendations of the LSPS are relevant in the context of the Strategy:

- *Promote and preserve our natural environment and wildlife habitat.*
- *Liaise with NSW Government agencies to further develop and provide opportunity for the natural areas of Lake Hume, Doodle Cooma Swamp, Gum Swamp, Woomargama National Park, Murray River, Benambra National Park and Billabong Creek.*
- *Seek (funding) opportunities to undertake environmental management studies in consultation with government and community to update and inform new biodiversity mapping layer in the GHLEP.*

The relevant action items listed under this Planning Priority include:

1. *On review of the Greater Hume Local Environment Plan investigate the suitability of existing biodiversity layers and associated controls and consider whether less coarse biodiversity mapping should be provided.*
2. *To better identify land with high conservation attributes, Council undertake a review of road and public space biodiversity mapping.*

Planning Priority Nine: Climate change and natural hazards

The following recommendations of the LSPS are relevant in the context of the Strategy:

Council have already undertaken extensive flood planning work through the preparation of the Culcairn, Henty, Holbrook, Jindera and Walla Walla flood studies, to understand the extent of these major rain and flooding events. These studies identify the high and low flooding hazard areas, these areas indicate whether land is or is not suitable for more intensive development. Ensuring the findings of these studies are replicated in local planning controls will be necessary to manage community expectations and development on land subject to inundation.

When planning and developing new urban areas, design and environmental considerations such as vegetation, water management (water sensitive urban design) and energy efficiency will be incorporated into the decision making process. This will assist our communities to build resilience to climate change

The LSPS also lists additional Planning Priority Actions that were recommended by nominated State government agencies. The following are relevant in the context of the Strategy:

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- *Promote biodiversity certification for new urban release areas and spot-rezonings.*
- *Focus land use intensification in areas of land that meet the definition of Category 1 – Exempt Land under the Local Land Services (LLS) Act.*
- *Consideration of flood related constraints in areas identified for development, including areas identified in the Local Strategic Planning Statement (LSPS)*
- *Avoid and minimise impacts to Aboriginal cultural heritage values from development in the LGA*
- *Consider the impacts of rural residential development particularly relating to consumption of agricultural land*
- *Where possible, strategically identify key heritage places and clusters*

Appendix A of the LSPS contains a number of planning maps, which depict various localities for potential changes in land use, including a plan for Jindera (Figure 7).

The Jindera map assists in providing the broad strategic basis for the recommendations contained in this Strategy.

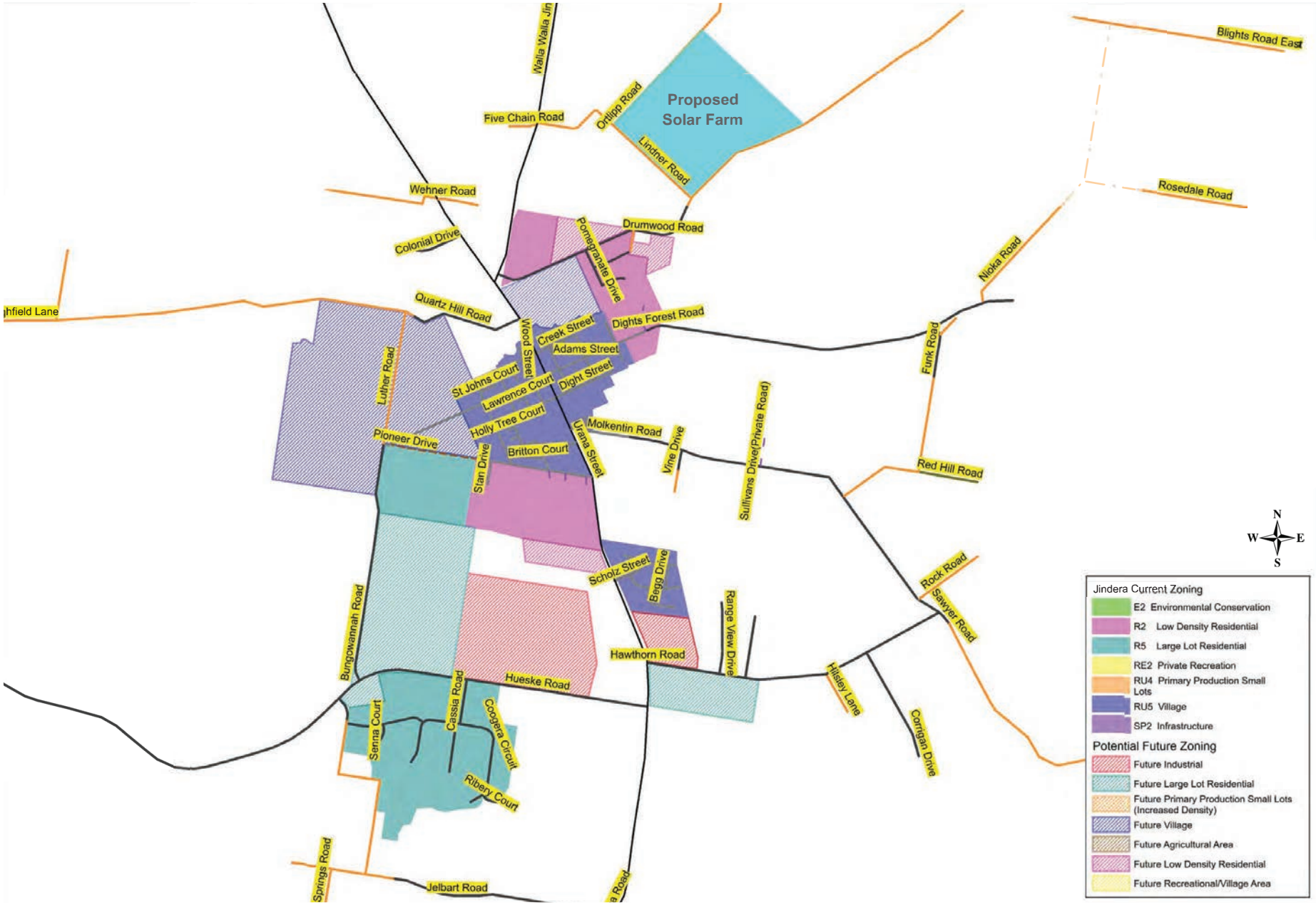

Figure 7 - Jindera Map contained in the Greater Hume Local Strategic Planning Statement

Greater Hume Shire Strategic Land Use Plan 2007-2030

The Greater Hume Shire Strategic Land Use Plan 2007-2030 (SLUP) was prepared in 2007 as a document to draw together the amalgamated Shires of Hume, Holbrook and Culcairn within a consolidated strategic plan. The SLUP served to guide the eventual application of zoning and overlays within the current Greater Hume Local Environmental Plan 2012.

The SLUP identifies that Jindera has sustained strong residential growth and that at the time demand for vacant residential lots in the township was estimated to be approximately 15 per annum. Key outcomes identified for residential growth of Jindera was the need for sufficient zoned land in the right location, and recognising the various infill opportunities for residential land. The following recommendations in the SLUP are noted in the context of the study area:

- *create greater opportunity for development of a range of residential lot sizes by varying development control provisions and zoning appropriate land*
- *maintain forward supply of residential land*
- *provide a number of development fronts*
- *investigate future options to augment sewer*
- *consider preparing an infrastructure strategy linked to sustained growth*

A Strategic Land Use Plan for Jindera is also reproduced within the *Greater Hume Shire Development Control Plan 2013* and identifies the study area within a residential growth front of Jindera. The Land Use Plan for Jindera is shown at Figure 8, and makes the following comments for the study area:

- *expand existing low density residential with urban services*
- *emphasise entrance point to town*

The Land Use Plan also indicates a desire to expand the nearby industrial estate and allow for continued rural living development (i.e. lots greater than 2 hectares) to establish further south beyond the low density precinct.

Jindera

Strategic Land Use Plan

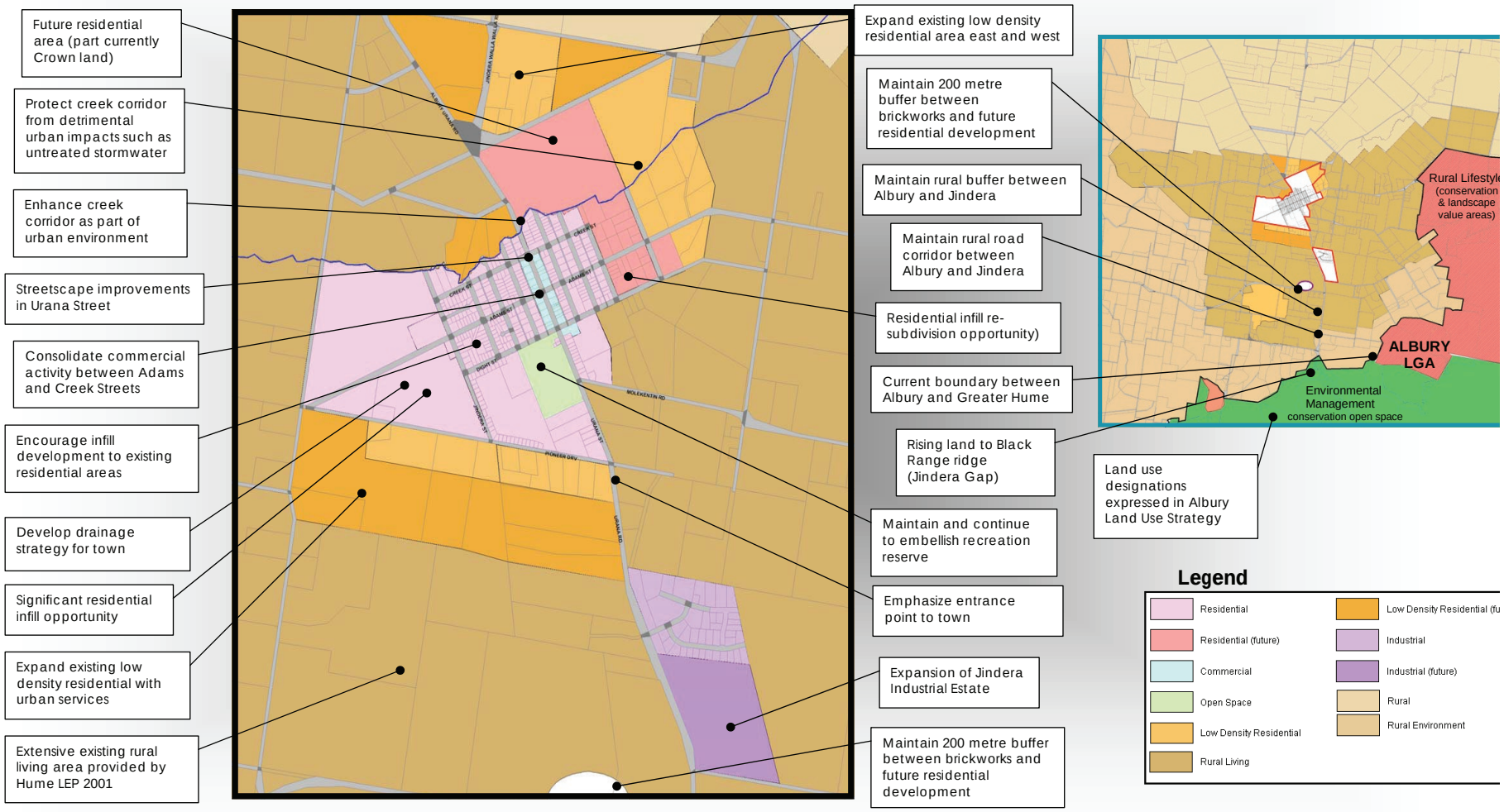

Figure 8 - Jindera Strategic Land Use Plan

South Jindera Low Density Residential Master Plan 2016

The South Jindera Low Density Residential Master Plan 2016 was prepared to provide a framework plan for the future development of low density residential zoned land located to the south of the main.

The purpose of this Master Plan was to inform and guide the release of the land in the short to longer term, as well as determining an appropriate lot size whilst ensuring the delivery of a consolidated urban development and associated infrastructure.

The Master Plan is relevant in the context of this Strategy as it provides a strategic context and detailed investigation of the development options and outcomes proposed for this site.

The Master Plan investigated two different development options for residential subdivision including development at a density of 2,000m2 versus 4,000m^2.

The report recommends a minimum lot size of 2,000m2 which will ensure that the land remains a transitional area between the primary residential areas of Jindera and surrounding non-urban land, while not prejudicing opportunities for longer term urban growth.

A copy of the endorsed Master Plan is provided in Figure 10.

Figure 9 - Jindera South Low Density Residential Master Plan

4.0 Constraints and Opportunities

4.1 Biodiversity

Jindera is located within the NSW South Western Slopes bioregion (Lower Slopes subregion), as well as the 'Brookong Plains' NSW Mitchell Landscape.

Vegetation within the study area largely comprises Plant Community Type 277 (PCT 277) Blakey's Red Gum – yellow box tall woodland of the NSW South Western Slopes Bioregion. This vegetation type is classified as a Critically Endangered Ecological Community (EEC) under Part 1 of Schedule 2 of the Biodiversity Conservation Act 2016 (BC Act) and is listed under Section 178 of the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) as Critically Endangered.

Other vegetation found within the study area comprises Plant Community Type 266 (PCT 266) White Box grassy woodland in the upper slopes of the NSW South Western Slopes bioregion.

Outside of this native vegetation, vegetation comprises exotic vegetation over non-native pasture grasses. This land is largely used for extensive agriculture and predominantly grazing of animals.

The LEP maps areas of "terrestrial biodiversity" within which Clause 6.2 requires Council to consider the impact of development on flora and fauna as well as "any appropriate measures proposed to avoid, minimise or mitigate" those impacts. These areas have been identified through aerial imagery and have not been 'ground truthed' for significance. They also do not identify scattered vegetation.

Figure 10 shows the areas mapped in the LEP for terrestrial biodiversity within the study area. Upon inspection, these areas generally reflect stands of remnant vegetation falling within the categories of PCT 266 and PCT 277.

Fauna within the study area includes woodland birds and marsupials in recognition of the existing overstorey vegetation and limited native groundcovers and lack of permanent water sources.

Having regard for the Plant Community Type predominant in the study area, vegetation potentially presents as a constraint for development not just because of its biodiversity significance but also because of the high cost of offsetting its removal. Fortunately, there remains large tracts of land within the study area that are either unconstrained by stands of remnant vegetation or contain scattered paddock trees at a lower density

Pressure for vegetation removal usually stems from development at an urban scale (e.g. within the RU5 Village Zone) where there is little or no scope for retention. However, even in these circumstances and particularly for so-called greenfield sites, stands of remnant vegetation can be retained as open space areas or locations that are otherwise constrained for development such as creek lines as part of the site master planning stage.

Similarly, roads and other infrastructure can be located to avoid areas of high biodiversity value, such as along roadways and road reserves.

Even in circumstances where vegetation removal is deemed necessary to release key development sites, there are opportunities within Jindera for this loss to be offset by setting aside areas for retention. This situation will avoid a developer having to pay for the high price of offset 'credits' associated with Plant Community Type 277.

Further investigation of land having the potential to accommodate the urban growth of Jindera reveals all of the above scenarios are possible.

There is less pressure on vegetation removal where development at lower densities, such as that presented by the provisions of the R2 Low Density Residential Zone (2,000m-4,000m^2) and R5 Large Lot Residential Zone (2ha+) are proposed. This is because it is easier for development to work around remnant vegetation and thus assist with retention. Consequently, the question of biodiversity as a development constraint in these areas is much less of an issue.

In conclusion, future development within the study area should seek to limit impacts on biodiversity to minimise the environmental impacts of the works and avoid requirements for biodiversity offsetting.

Where tree removal is proposed and where it exceeds the Biodiversity Offset Scheme (BOS) threshold, a Biodiversity Development Assessment Report (BDAR) report will be required under the provisions of the Biodiversity Conservation Act 2016.

To help offset some of the biodiversity credit obligations of development, Council or individual landowners should investigate options to create Biodiversity Stewardship sites as a separate exercise.

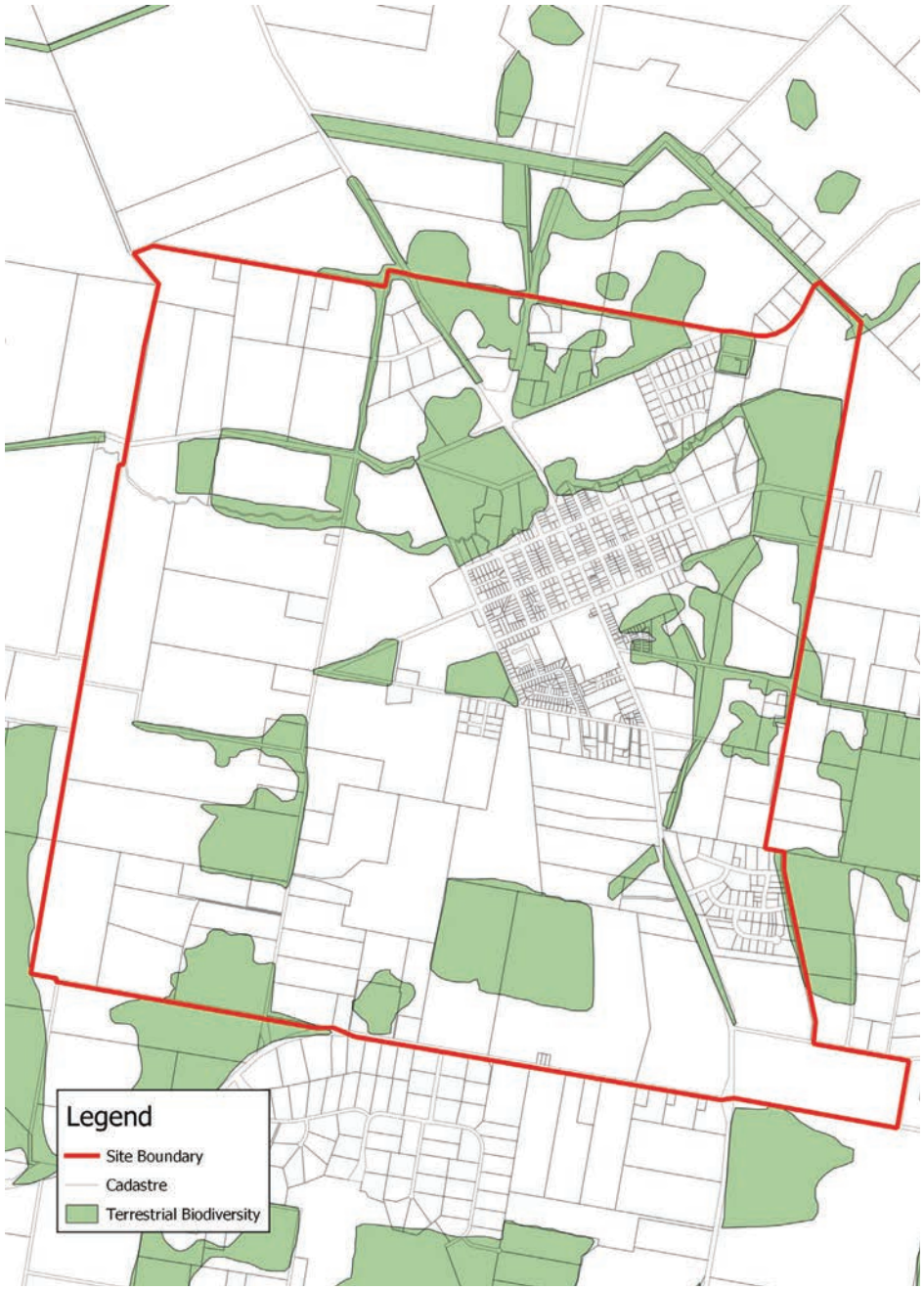

Figure 10 - Land mapped for biodiversity value

4.2 Flooding

Parts of Jindera, namely adjoining Four Mile Creek, as well as local drainage lines are subject to inundation from flooding and overland flow as identified within the Jindera Floodplain Risk Management Study and Plan ("the flood study").

Amongst the key outcomes of the flood study was the identification of land subject to the 1 in 100 year flood event (Figure 11). In addition, the flood study also identified the hydraulic categories of flood prone land ('flood fringe', 'flood storage' and 'floodway'), as well as the category of hazard ('low hazard' and 'high hazard').

In accordance with the requirements of the NSW Floodplain Development Manual development should seek to minimise the danger to life and property during floods.

Specifically, future development should seek to avoid areas of flood storage and floodway, which align with a high hazard level of flooding.

Where relevant, future developments shall also adopt the recommended mitigation and modification options as outlined within Section 7 of the flood study to ensure that land subject to inundation is appropriately managed into the future.

Please note that the Jindera Flood Study did not investigate land to the west of Bungowannah and Luther Roads. Therefore, any future development of this land will need to first investigate the impacts of flooding.

Figure 11 - Flood Prone Land Map

4.3 Bushfire

A bushfire prone area is any land that can support a bush fire or is likely to be subject to bush fire attack.

In general, a bush fire prone area is an area mapped that identifies the vegetation types and associated buffer zones. These are generally areas located close to bushfire hazards such as forests, woodlands or grasslands.

Bushfire mapping is classified into three different categories:

- Vegetation Category 1 is considered to be highest risk for bushfire (red);
- Vegetation Category 2 is considered to be the lowest bushfire risk (light orange); and
- Vegetation Category 3 is considered to be a medium bushfire risk (dark orange).

Bushfire prone land within the main township of Jindera is classified as Category 1 due to the dense vegetation present on-site. Other portions of the town are classified as Category 2 (Figure 12).

In addition, Planning for Bushfire Protection Guideline 2019 (PBP) now provides a broader definition of grassland than previous versions with any undeveloped land now considered to be 'grassland vegetation'.

Consequently, further development of land shall have regard to the Jindera bushfire prone land map, as well as the broader grassland bushfire hazard. Where necessary, any future subdivisions shall incorporate relevant bushfire provision measures such as Asset Protection Zones in accordance with the requirements of PBP.

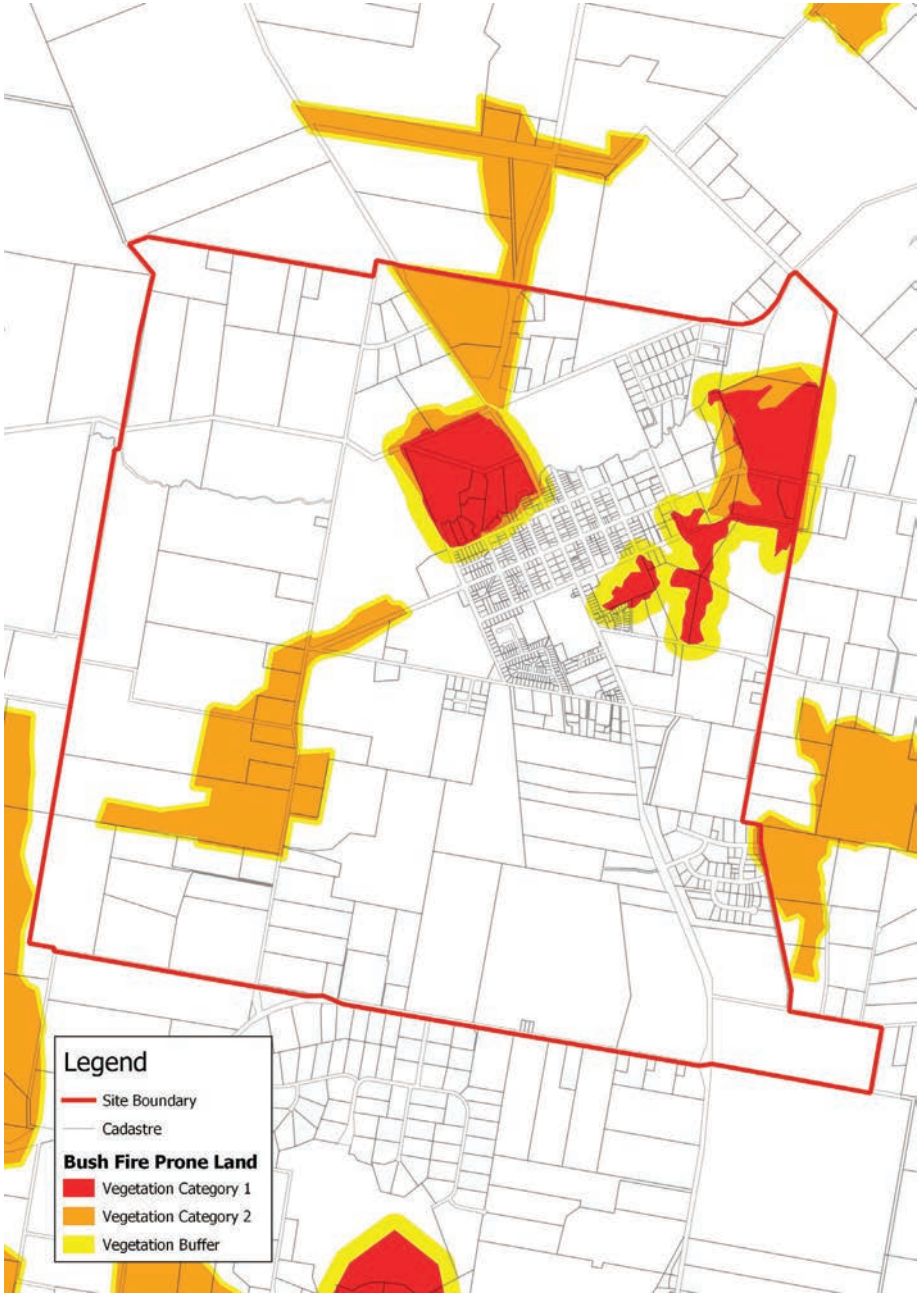

Figure 12 - Bushfire Prone Land

4.3 Heritage

Non-Aboriginal Heritage

The study area contains 11 non-Aboriginal heritage items of local significance as identified within Schedule 5 of the LEP (Figure 13). Notable heritage items include the Blacksmiths shop, Jindera School of Arts, St John's Lutheran Church, St Paul's Anglican Church and Pioneer Museum (Wagners Store) and outbuildings.

Aboriginal Heritage

The original inhabitants of the Greater Hume Council area are the Wiradjuri Aboriginal people.

Areas of significance to Aboriginal people can generally be expected to occur across the Council area. This includes both traditional and contemporary associations of Aboriginal people with the environment as well as physical sites (i.e. that contain archaeological evidence).

Aboriginal heritage exists as tangible and intangible evidence. The latter mainly comprises archaeological sites, whose locations can be broadly predicted by a combination of landform variables e.g. shell middens and earth mounds tend to occur along rivers, artefact scatters representing ancient campsites tend to occur on flat, well drained ground near permanent water sources, whilst burials and cemeteries tend to occur in sand hills near watercourses.

A predictive model has been established for the study area based on other known Aboriginal items listed in the NSW Aboriginal Heritage Information Management System (AHIMS). Using this database, a general area of possible Aboriginal sensitivity has been nominated 50 metres either side of Four Mile Creek.

Figure 13 - Heritage Map

4.4 Land Capability and Agricultural Value

The majority of the Greater Hume Council area is zoned for rural purposes and is broadly used for dryland cropping and grazing with more forestry (softwood plantations) in the eastern part.

Land immediately surrounding Jindera is generally rated 'high' in terms of agricultural land quality. As the land rises to the north, west and south, the land quality changes to 'average'.

All land located outside of the developed area of Jindera is zoned RU4 Primary Production Small Lots with a corresponding 8 hectare MLS for subdivision. This land is generally used and intended for small scale agricultural activities, but is also being used for 'hobby farm purposes'.

Although the Council area can be viewed as a traditional rural and agricultural based local government area, the characteristics of the southern part of the council area continues to change as a result of ongoing demand for rural living subdivision in commuting distance of Albury-Wodonga.

The rural living area that has established around Jindera and other areas now within the Albury LGA typify the changing face of this part of Greater Hume from a predominantly agricultural community to a commuting based rural lifestyle community.

Similarly, land management for native vegetation removal in the rural zones is undertaken in accordance with the Local Land Services Act 2013. For the purposes of this Study, much of the land surrounding the main Jindera township is classified as 'Category 1 Exempt Land' as it was cleared of native vegetation as at 1 January 1990 (Figure 14).

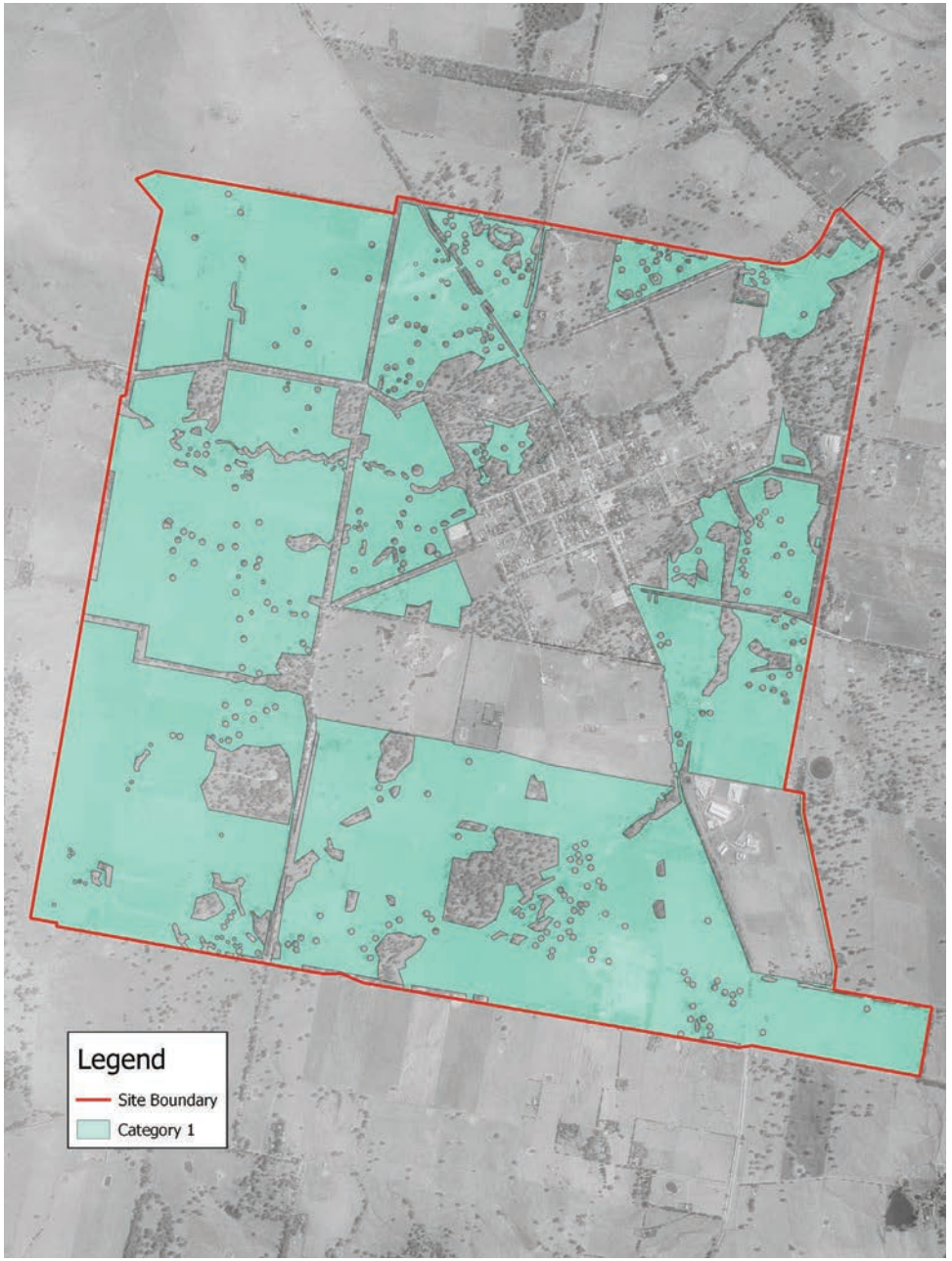

Figure 14 - Category 1 Exempt Land Map (Aerial Photograph 1990)

4.4 Traffic and Transport

The Jindera township is serviced by a number of major road connectors (Figure 15) that provide access to key infrastructure and services.

Urana Road forms the main street of Jindera and provides the main north-south access route through town. This road is identified as a classified road pursuant to the Roads Act 1993, and therefore future development alongside this road will be required to consider SEPP Infrastructure as outlined in Section 3.3.1 of the Strategy.

Other major roads contained within the study area include Adams Street, Pioneer Drive, Molkentin Road, Hueske Road, Bungowannah Road, Dights Forest Road, Quartz Hill Road, Luther Road and Walla Walla-Jindera Road.

All these roadways are sealed, except for Quartz Hill Road, Luther Road and the western portion of Pioneer Drive, which remain unsealed. Consideration of upgrades to these roads may be required into the future depending on traffic demand volumes.

Key traffic intersections within the study area comprise formalised roundabouts at the intersections of Creek and Adams Street where they intersect Urana Road, whilst a new roundabout is planned for the intersection of Pioneer Drive and Urana Road.

Jindera does not currently contain any traffic lights and there are no intentions in the medium to long-term to provide these.

In accordance with Council's engineering design guidelines all new subdivisions will be required to provide sealed roads and where necessary incorporate formalised kerb and guttering.

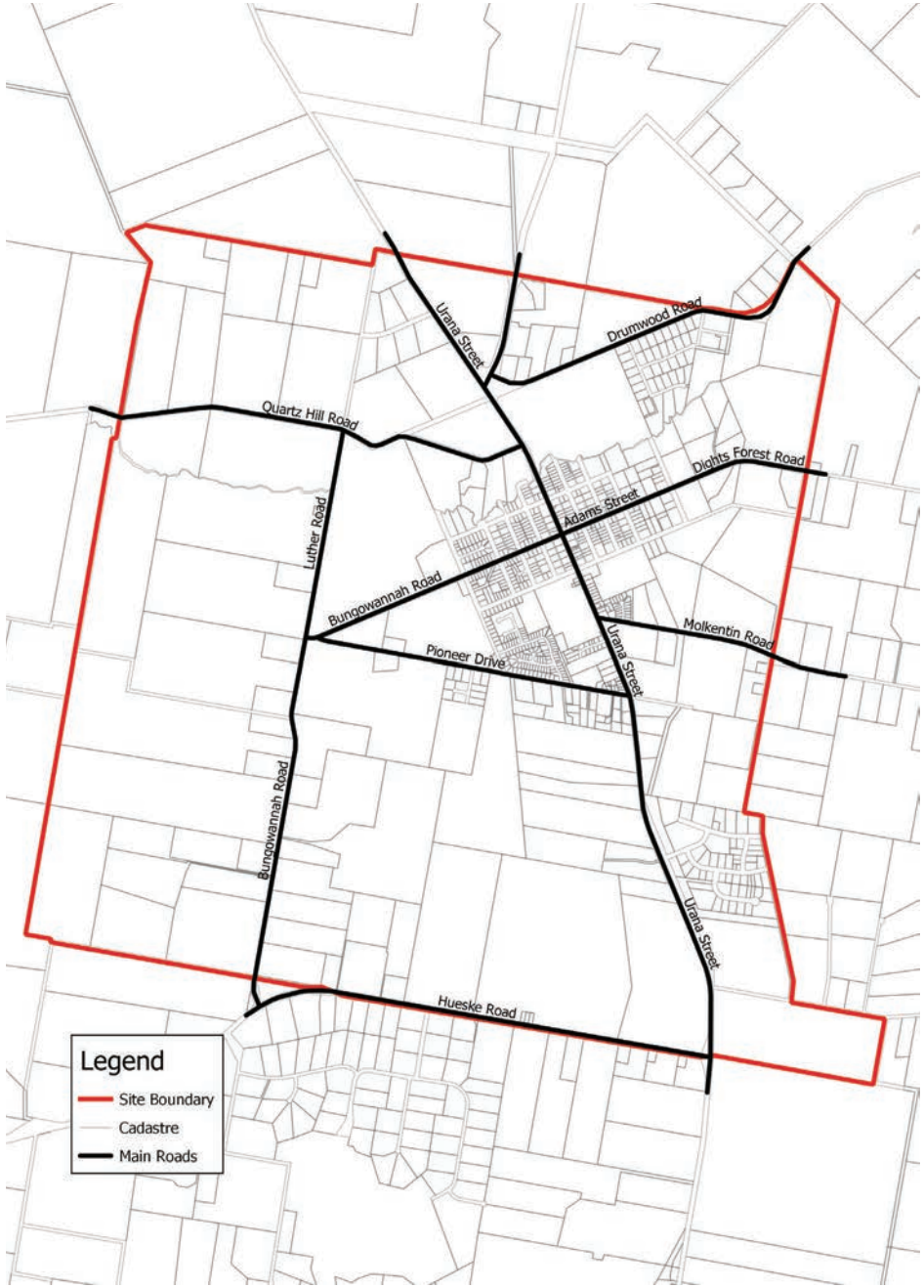

Figure 15 - Traffic and Transport Map

4.5 Infrastructure and Services

Jindera has access to a range of infrastructure and services as outlined in Table 8.

Council is currently in the process of preparing an Integrated Water Cycle Management Strategy (IWCMS), which will identify current and future capacity issues and upgrade requirements.

The outcomes of this Strategy will inform the recommendations of the IWCMS.

Table 8 - Summary of Infrastructure and Services

Infrastructure	Infrastructure
Water	Water supply is provided to the main urban area of Jindera via a trunk main and reticulated supply network as part of the Village Water Supply Scheme. This water supply is largely provided from the neighbouring Albury City Council and is pumped to a reservoir tank located at the top of the Jindera Gap, where it is gravity fed to the town and beyond. There are no supply issues with the current water network although augmentation will be required to accommodate Jindera's growth..
Sewerage	Reticulated sewerage is provided to the main urban area of Jindera with the sewerage treatment works located to the north east of the main township. Current investigations have identified the need to upgrade a number of the existing sewer pump stations within the study area to ensure that they have enough capacity to accommodate future growth and avoid issues of odours. These upgrade works will be dependent on the location of expected future growth and topographical constraints. Outside of the main urban areas, properties are connected to on-site effluent disposal systems (septic, aerated etc).
Gas	The main urban area of Jindera has access to reticulated gas, whilst properties located outside of this area utilise a bottled gas supply.
Drainage	Urban stormwater drainage infrastructure exists within the main urban area of Jindera. Outside of this area, properties are reliant upon rural drainage.
Electricity	Electrical supply is available to Jindera and is provided via an overhead power supply. In recent times, electricity supply as part of newly established subdivisions have been via underground supply.
Telecommunications	Telecommunications are readily available, although mobile phone reception has been an issue in the past.
Waste Management	Council operates a waste transfer station to the north east of the main township and all properties have access to kerbside garbage collection.
Roads	All the roads within the study area are council owned with the exception of Urana Road, which is an RMS classified road. The majority of these roads are sealed, however there are still several unsealed roads located within the area that may require upgrading in the future.

A plan showing the current reticulated water and sewerage network is provided in Figure 16.

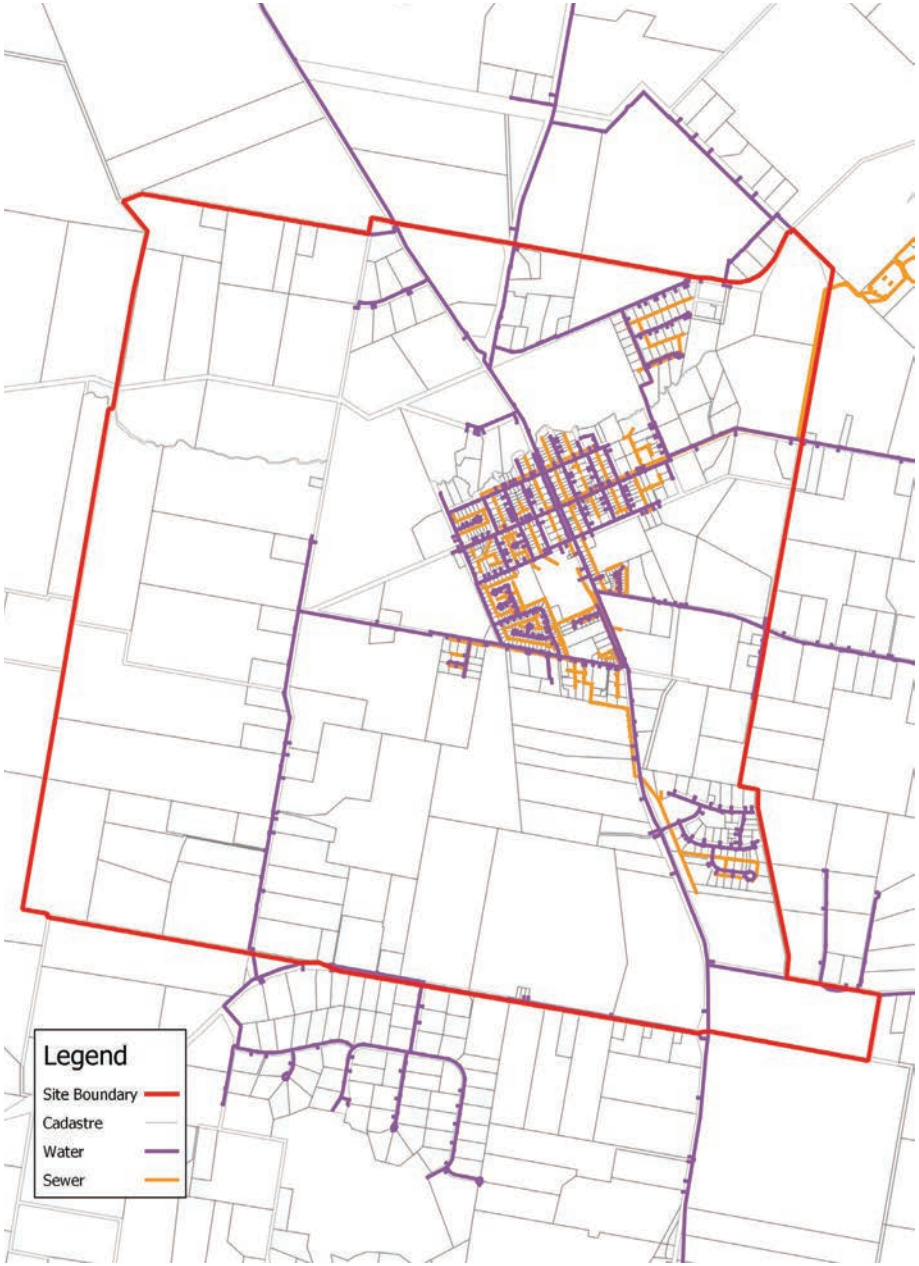

Figure 16 - Infrastructure and Services Map

4.7 Land Use Conflicts

Land use conflicts may arise when incompatible land uses are located in close proximity to each other, which in turn may impact on the amenity of sensitive land uses, the efficient use of productive land, or environmental and landscape values.

Specifically, the Council area includes areas of productive agricultural land that could be threatened by unplanned expansion of residential and rural living development. Though the long-term protection of functioning agricultural land within Greater Hume is an important strategic objective, this objective must recognise that some rural areas of the Council area have already been fragmented and no longer have the capacity to operate in traditional agricultural type holdings.

An assessment of land use conflicts has been undertaken consistent with the NSW Department of Primary Industry's Land Use Conflict Risk Assessment (LUCRA) guidelines.

Key potential land use conflicts contained within the study area include:

1. Sewerage treatment works
2. Brickworks site
3. Existing industrial estate
4. Industrial estate expansion
5. Waste transfer station
6. Possible future industrial expansion area

Furthermore, consideration will need to be given to the location of future residential zoned land adjacent to productive agricultural activities.

A plan showing these potential land use conflicts is provided in Figure 17.

Figure 17 - Land Use Conflict Map

4.8 Summary of Constraints and Opportunities

To help identify potential candidate sites for rezoning and development, consideration has been given to the environmental constraints and opportunities outlined in Sections 4.1 to 4.7 of the Strategy.

A plan showing the combined constraints and opportunities for Jindera is provided in Figure 18.

These features have formed the basis for the recommended rezoning and minimum lot size changes outlined in Section 5 of the Strategy.

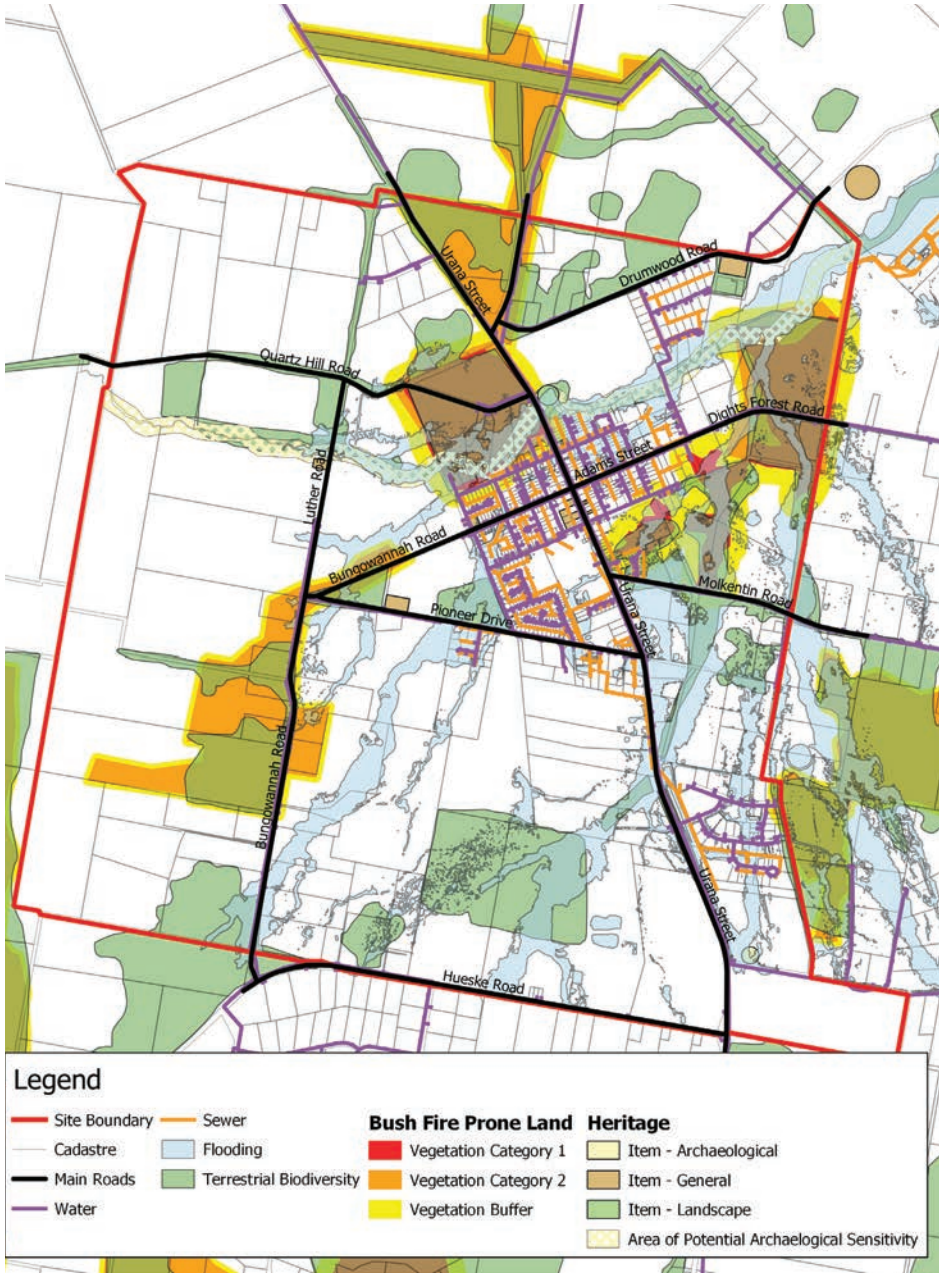

Figure 18 - Combined Constraints and Opportunities Map

5.0 Land Use Strategy

5.1 RU5 Village Zone

Based on the existing development pattern and zoning of the area, environmental constraints and the logical extension of services, the Strategy recommends rezoning two parcels of land to the north-west of the existing township to RU5 Village as identified in Figure 18.

These parcels of land are described as follows:

- 81 Luther Road (Lot 2, DP1216785); and
- 214-224 Pioneer Drive (part Lot 66, DP1195450).

Provision is also available to expand this zoning further west in the future onto land generally bordered by Quartz Hill Road to the north, Luther Road to the east and a government road reserve to the south and west. In the interim it is recommended that this land be retained in a rural zone.

The recommended rezoning of this land is consistent with previous strategic planning investigations and recommendations identified in Council's LSPS (Figure 7) and are consistent with the environmental constraints of the land.

The properties are currently zoned RU4 Primary Production Small Lots and have a combined total area of approximately 72 hectares.

Both properties are largely unconstrained and the topography of the land is generally flat. Vegetation on-site comprises grassy box gum woodland (yellow box and white box) in both patches and individual scattered paddock trees.

Four Mile Creek bisects the central portions of Lot 2 and the property also includes a flood storage area located towards the Adams Street frontage of the property.

The land is not currently used for productive farming land and is largely classified as Category 1 land under the provisions of the *Local Land Services Act 2013* (Figure 14).

Infrastructure and services including water and sewerage are readily available to the property and can be extended from the main urban area. Road access is also available via Adams Street and Pioneer Drive. It is noted however, that the western section of Pioneer Drive will need to be upgraded to accommodate future development of this land.

Due to the size of these properties and the need to coordinate infrastructure and services, it is recommended that a site-specific masterplan be prepared for these properties.

Amongst key issues to be investigated include:

- Biodiversity impacts;
- Flooding impacts;
- Aboriginal cultural heritage;
- Infrastructure provisions and requirements;
- Provision of open space and landscaping;
- Development staging and sequencing;
- Urban design controls.

Further details regarding design guidelines are discussed in Section 7.3 of this report.

In total, the future subdivision of this land based on the proposed zoning and minimum lot size recommendations of this Strategy could increase the supply of RU5 Village zoned lots within Jindera by up to 580 lots.

This equates to approximately 50 years' worth of residential land supply based on current residential take-up rates.

Given this large proposed level of land supply, it is recommended that this area be developed over a number of stages as outlined in Section 5.5 of this report.

5.2 R2 Low Density Residential

The Strategy has identified three candidate sites for rezoning to R2 Low Density Residential based on their location, proximity to services and adjoining land use and environmental constraints.

These parcels of land are described as follows:

- 63 & 107 Molkentin Road (Lots 51 & 52, DP713015);
- 187-313 & 315-323 Pioneer Drive (Lot 2, DP1064969 and Lot 1, DP1006582);
- Wagner Drive (part), 1017, 1019 & 1037 Urana Road, (Part Lot 100, DP1267384, Lot 2, DP240938, Lot 1, DP778051 and Lot 1011, DP1068269); and
- Hawthorn Road (Lot 88, DP753345).

A plan identifying these properties is provided in Figure 18.

The recommended rezoning of this land is generally consistent with previous strategic planning investigations and recommendations identified in Council's LSPS (Figure 7) and are consistent with the environmental constraints of the land.

The properties are currently zoned RU4 Primary Production Small Lots with the exception of 187-313 and 315-323 Pioneer Drive, which is zoned R5 Large Lot Residential.

The properties have a combined total area of approximately 175 hectares and are largely unconstrained from an environmental and biodiversity perspective.

Given their peripheral location or their location adjacent to other existing low density residential zoned land, the land is considered appropriate for low density residential purposes.

Each of these properties have readily available access to infrastructure and services and the recommended minimum lot size for these areas is proposed at 2,000m^2 and 4,000m^2 respectively.

The latter 4,000m^2 minimum lot size is proposed for the land located at the western end of Pioneer Drive to reflect the generally larger lot size pattern in this area and to provide a transition to R5 Large Lot Residential zoned land to the south and west.

Similarly, a 4,000m^2 minimum lot size is recommended for the property located on the southern side of Hawthorn Road to reflect the peripheral location of the property and its proximity to current and future industrial zoned land.

All the other remaining candidate sites are proposed to have a 2,000m^2 minimum lot size.

This equates to approximately 48 years' worth of residential land supply based on current residential take-up rates.

Whilst it is acknolwedged that this equates to a large level of land supply, based on recent take-up rates, demand for this form of residential product has been high with limited supply of developed residential lots artificially preventing higher take-up rates.

5.3 R5 Large Lot Residential

The Strategy has identified two candidate sites for rezoning to R5 Large Lot Residential in the short term based on their location, proximity to services and adjoining land use and environmental constraints.

These parcels of land are broadly described as follows:

- Land bordered by Drumwood Road, Luther Road and Wehner Road; and
- Land bordered by Hueske Road to the south and -313 & 315-323 Pioneer Drive (Lot 2, DP1064969 and Bungowannah Road to the east.

Given the relatively low level of supply of R5 Large Lot Residential Zoned land and a general lack of greenfield residential areas, provision has also been made to expand this zoning further north west and south west into the future onto land located on the western side of Bungowannah Road and Luther Road. This land is generally unconstrained and buffered to rural land located further west by a ridgeline, as well as having readily available access to reticulated water.

A plan identifying these properties is provided in Figure 18.

The recommended rezoning of this land is generally consistent with previous strategic planning investigations and recommendations identified in Council's LSPS (Figure 7) and are consistent with the environmental constraints of the land.

The properties are currently zoned RU4 Primary Production Small Lots with the exception of a small area of land located to the north of Drumwood Road, which is zoned R2 Low Density Residential.

These two properties have a combined total area of approximately 230 hectares and are largely unconstrained from an environmental and biodiversity perspective.

In addition, the two areas proposed for future R5 residential zoning have a combined area of approximately 260 hectares.

It is noted however that much of this land has already been developed for rural lifestyle and so-called hobby farming purposes with lot sizes ranging from 2-8 hectares, consistent with previous planning controls that applied to the land.

All of this land is located on the peripheral of the study area and has either already been developed for rural lifestyle purposes or adjoins land that has been developed for rural lifestyle purposes.

The adoption of an R5 Large Lot Residential zone is largely considered to reflect the existing subdivision pattern and lot fragmentation that has already occurred within these areas.

Road access is available to this land, so too is a reticulated water supply. Reticulated sewerage is not available to these areas given their peripheral location.

In response, a 2 hectare minimum lot size is recommended to provide a transition between the main urban area of Jindera the outlying rural lands. The adoption of a 2 hectare minimum lot size will also allow for the on-site disposal of effluent and avoids the need to have to extend reticulated sewerage to these remote locations.

Furthermore, the proposed larger minimum lot size seeks to avoid impacts on biodiversity as it will allow future subdivision of this land to incorporate or avoid the need to have to remove any native vegetation.

This equates to approximately 7.5 years' worth of residential land supply based on current residential take-up rates. When including the future R5 zoned land, this total increases to 16.5 years worth of land supply.

5.4 Jindera Residential Land Use Strategy

The proposed land zoning and minimum lot size recommendations contained within this Strategy and as outlined in Sections 5.1 to 5.3 are identified in Figures 19 and 20.

Based on the land zoning and minimum lot size recommendations of the Strategy, this land has the potential to cater for up to approximately 1,176 additional residential lots as outlined in Table 9.

Based on the average take-up rate of dwellings for the last 6 years (30), this equates to a residential land supply of approximately 39 years.

When considering the average take-up rate since 2018, being 35 dwellings per annum, this level of residential land supply is reduced to approximately 33.5 years.

Table 9 - Proposed Residential Land Supply*

Zone	Minimum Lot Size	Area	Proposed Residential Land Supply (lots)	Years Supply
R2 Low Density Residential	2,000m^2	88ha	352	32
	4,000m^2	87ha	174	16
R5 Large Lot Residential	2ha	230ha	72	8
RU5 Village	600m^2	72ha	580	52
Total			1,178	39

* This figure excludes land identified as future residential and shown hatched in Figures 19 and 20

5.5 Development Staging

Given the need to coordinate land development and the provision and extension of services and infrastructure, it is important that development occurs in a logical and sequential order.

Whilst this Strategy provides the land use zoning and minimum lot size recommendations for land within Jindera for the next 20-30 years, given the level of land supply proposed as part of this Strategy and current take-up rates, it is recommend that the rezoning and development of this land be staged.

Specifically, urban development (proposed RU5 Village) shall expand outwards from the main urban area of Jindera and extend westwards along Bungowannah Road/Adams Street. Given the size of this parcel of land, it is recommended that land located either side of this road be rezoned and developed in the interim, before extending northwards over Four Mile Creek.

Similarly, R2 Low Density Residential zoned land should initially extend to the south of Heritage Park and Jindera Industrial Estate as existing infrastructure and services have recently been extended to these areas and are readily available.

Given the relatively low level of supply of R5 Large Lot Residential zoned land, it is recommended that both land parcels identified for future development (excluding land located to the west of Bungowannah Road and Luther Road) be rezoned in the short-term to cater for this current lack of supply.

Should land identified as 'future growth' on the western side of Bungowannah Road and Luther Road be proposed to be rezoned in the interim, detailed investigations, namely infrastructure provision and flooding will need to be undertaken before this land is considered appropriate for rezoning to avoid 'leapfrog development'.

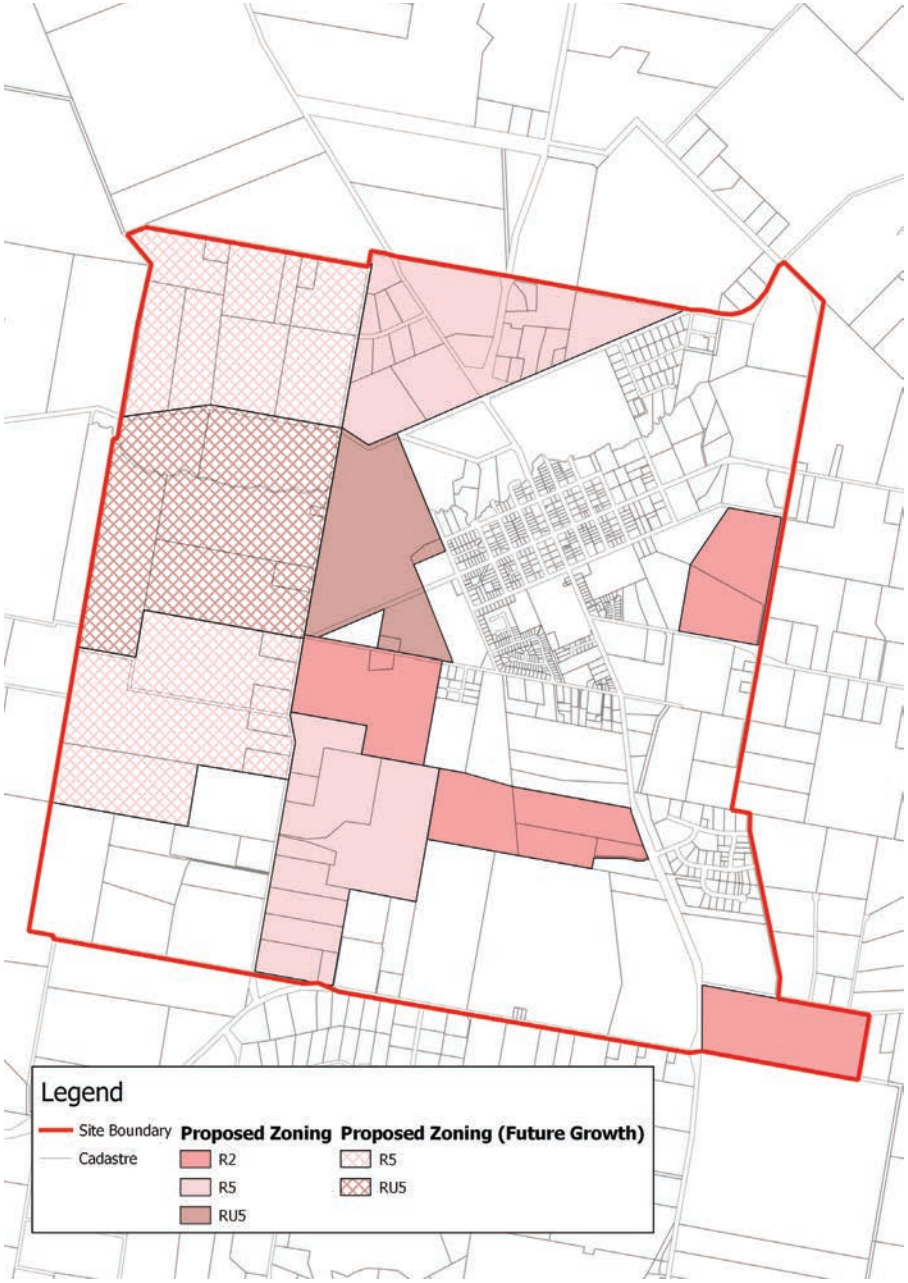

Figure 19 - Recommended Zoning Map

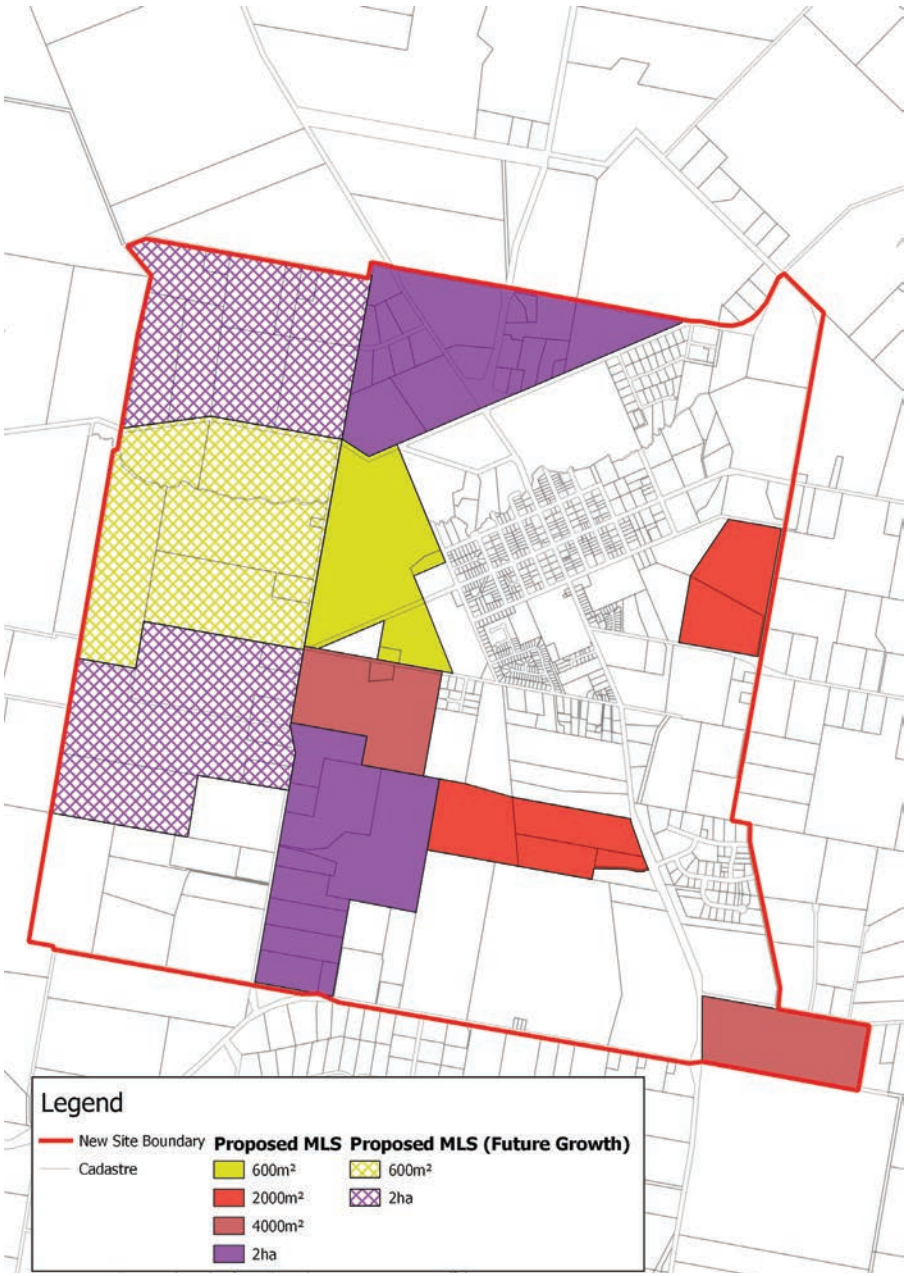

Figure 20 - Recommended Minimum Lot Size Map

6.0 Implementation

6.1 Infrastructure and Services

The development outcomes sought by this Strategy will result in the need to augment and extend certain infrastructure and services.

As outlined earlier in this report, Council is currently in the process of preparing an Integrated Water Cycle Management Strategy (IWCMS), which will identify current and future capacity issues and upgrade requirements.

The outcomes of this Strategy will inform the recommendations of the IWCMS.

Table 10 summarises the relevant infrastructure upgrade requirements necessary to achieve the outcomes sought by this Strategy.

Furthermore, Council will levy developer contributions on residential subdivisions in accordance with its Development Servicing Plans to help contribute towards the funding of this infrastructure.

Table 10 - Summary of Infrastructure and Services

Infrastructure	Infrastructure
Water	The existing reticulated water supply network has capacity to service the future development outcomes identified by this Strategy as part of the existing Village Water Supply Scheme. Existing water mains will need to be extended as part of overall staging of development and where necessary trunk main infrastructure may need to be upgraded. In addition, Council have identified the need to construct a second reservoir tank in the future to maintain a secure and reliable water supply. Potential locations for this tank include the Jindera Gap and undeveloped elevated rural land located to the west of town.
Sewerage	All land proposed to be zoned RU5 Village and R2 Low Density Residential will need to be serviced with reticulated sewerage via an extension of the existing sewer network. Current investigations have identified the need to upgrade a number of the existing sewer pump stations within the study area to ensure that they have enough capacity to accommodate future growth and avoid issues of odours. In particular, Council have identified the need to construct a new sewerage pump station in the western portion of the town to service this area. Given the topography of the land and the need to avoid pumping, this new pump station should be located on low-lying land. For those properties zoned, R5 Large Lot Residential, sewerage will be disposed of on-site.
Gas	There are no servicing or capacity constraints associated with the provision of gas.
Drainage	Future development of land in the RU5 Village and R2 Low Density Residential will require the formal construction of urban stormwater drainage (pit and pipe).
Electricity	There are no servicing or capacity issues associated with the provision of electricity.
Telecommunications	There are no servicing or capacity issues associated with the provision of telecommunications.
Waste Management	There are no servicing or capacity issues associated with the provision of waste management. It is recommended however that an appropriate buffer be established between potential low-density residential land and Council's waste transfer station to ensure the ongoing protection of this facility.
Roads	New residential subdivisions will be required to construct all new roadways in accordance with Council's engineering design guidelines. Furthermore, the western portion of Pioneer Drive will need to be sealed as part of the future development of this land.

6.2 Open Space

The main township of Jindera is well-serviced with areas of both public and private open space.

Public open space within Jindera includes Pioneer Park, the Jindera Village Green, as well as the multi-faceted Jindera Recreation Reserve that provides for the main recreational needs of the community and includes a football oval, netball courts, tennis courts, skate park; primitive camping ground (sometimes referred to as 'free camping'), swimming pool and associated change rooms and car parking.

Private recreational activities within the township include the Jindera Golf Club and Jindera Pony Club.

As part of the future development and growth of the town, there is need to create new open space areas. These open space areas should generally be located within a 400 metre walking distance of residential housing and where possible should provide for both passive and active recreational needs, as well the co-location of facilities adjacent to environmental areas.

It is recommended that two new public open space areas be established to the north west of the existing township indicatively located within the central portions of the proposed RU5 village zoned land as identified within Figure 21.

An additional area of active open space is also recommended to the north east of the main township to service this large RU5 zoned parcel of land. Furthermore, a linear corridor of open space is also proposed along Four Mile Creek, which will link to other open space areas to the west.

There is no need to provide for additional open space areas outside of these areas given the minimum lot sizes proposed as part of this Strategy and the ability to provide for individual recreational needs on-site.

Figure 21 - Open Space Plan

6.3 Residential Design Guidelines

6.3.1 General Design Guidelines

Subdivision Form and Layout

Objectives

a. To encourage a range of lot sizes and densities to meet the needs of a growing community.

b. To provide lots with areas and dimensions which are capable of accommodating future dwellings and associated infrastructure or outbuildings.

c. To promote principles of energy efficient design and maximise opportunities for energy efficiency for future dwellings.

d. To encourage future lots with areas and dimensions which consider and respond to environmental features and site constraints.

Guidelines

1. Future lots created for the purpose of a dwelling house are to comply with clause 4.1 and the Lot Size Map of the Greater Hume Local Environmental Plan 2012 (or any subsequent plan).
2. Subdivision layout is to create a legible and permeable street hierarchy that is responsive to existing conditions of the property and solar design principles.
3. Residential lots should be generally rectangular in geometry where possible.
4. Subdivision layout is to be designed to encourage future dwellings to front a main internal road.
5. Use of battle-axe lots are to be minimised. Any proposal to create a battle axe lot must demonstrate that there would be no alternative due to site constraints or characteristics of the proposed subdivision.

Road Network

Objectives

a. To establish a framework of interconnected streets providing safe, convenient and clear access within and beyond the Precinct.

b. To ensure the creation of a road and street network which responds to the expected capacities.

c. To facilitate energy efficient development outcomes by defining suitable road and lot orientations.

d. To establish new intersections in safe and convenient locations and of a standard capable of accommodating expected traffic movements.

e. To contribute to the creation of attractive streetscapes and provide opportunities for the retention of roadside vegetation.

Guidelines

1. New internal roads are to be designed in accordance with the relevant Guidelines for subdivisions and development in Greater Hume Shire
2. All lots are to be provided with access to a public road.
3. Easements for access will only be considered in extraordinary circumstances.
4. Where necessary, new intersections will need to be justified and considered as part of the overall road network.
5. Footpaths and pathways shall be provided throughout subdivisions in the RU5 Village zone.

Open Space

Objectives

a. Residents living within urban residential estates shall have access to public open space areas.

b. Open space areas should be co-located where possible with natural environment areas.

Guidelines

1. Open space areas shall be provided in accordance with Figure 20.
2. Open space areas shall be embellished and contain opportunities for both passive and active open space.

Utilities and Infrastructure

Objectives

a. To ensure all required utilities and infrastructure for the development can be provided.

b. To provide appropriate provision of infrastructure and services to accommodate residential development.

c. To ensure efficient extension and construction of infrastructure capable of accommodating the expected development loads.

Guidelines

1. All lots are to be provided with connection to potable water and sewerage services (except for in the R5 Large Lot Residential Zone), in accordance with Council's requirements as the relevant water and sewerage authority.
2. Reticulated water supply is to be provided in accordance with the relevant Guidelines for subdivisions and development in Greater Hume.
3. Details shall be provided by the applicant, demonstrating that any subdivision proposal is generally in accordance with the drainage requirements of the Drainage and Services Plan. Applicants are encouraged to include use of water sensitive urban design measures to maximise the re-use of stormwater and/or reduces the rate of flow from the property.
4. To ensure the delivery of an integrated stormwater management system, Council may consider temporary drainage provisions in circumstances where primary drainage systems (i.e. detention) is shown in later stages and the applicant can demonstrate a suitable temporary solution.
5. Applicants should discuss servicing requirements for electricity, telecommunications and natural gas with relevant service providers.

Landscaping & Biodiversity

Objectives

a. Encourage the use of species that will contribute to an increase in biodiversity values of the site.

b. Encourage applicants to retain and incorporate existing landscape features wherever possible within the subdivision design.

Guidelines

1. Consistent street tree plantings are to be provided as part of new subdivision development. Preference should be given to native species and those with low water requirements.
2. Consideration should be given to retaining significant existing trees, or groups of trees, wherever possible. These may be contained within residential lots, new road reserves and other reserves.
3. Opportunities for re-vegetation, particularly as buffer or screening plantings, should be considered during the subdivision process to enhance visual and landscape amenity.

Interface Considerations

Objectives

a. To assist in facilitating an appropriate and aesthetic interface between buildings and major road corridors, waterways and environmental corridors.

b. To ensure that development provides an appropriate interface to rural areas and bushfire hazards.

c. To ensure future development of the land does not impact upon the function of existing industrial operations and major road corridors.

Guidelines

1. Open post and wire or post and rail fencing is to be constructed along lot boundaries interfacing with major road corridors.
2. Perimeter roads shall be provided along environmental reserves and open space areas.
3. Asset Protection Zones shall be incorporated within the development site in accordance with the requirements for Planning for Bushfire Protection.
4. Development adjacent to the Jindera waste transfer station shall incorporate an appropriate interface buffer to protect these adjoining facilities.

Building Design

Objectives

a. To achieve a high standard of amenity and urban design that is reflective of the rural character of the area.

b. To encourage energy efficiency and crime prevent through environmental design principles.

Guidelines

1. Residential dwellings shall address the street and be readily identifiable and include front doors and windows that address the street.
2. Massing and articulation are to reduce apparent scale and bulk and create visually interesting buildings.
3. The living areas of dwellings shall be orientated to face north.
4. Development is to be sited and designed to acceptably reduce the impact of noise in the locality.

6.3.2 Proposed RU5 Village Land

In addition to the general design guidelines outlined in Section 6.3.1, development of the proposed RU5 Village zoned parcel of land requires the preparation of a site-specific master plan.

Objectives

a. To encourage good site planning based on an analysis and understanding of the site and context.

b. To ensure that development occurs in an integrated and staged manner.

c. To ensure that development minimise environmental harm and reduces the risks of natural hazards.

Guidelines

1. Development of this land shall not occur until a site-specific master plan has been prepared for the site.

2. The site-specific master plan shall consider as a minimum the following items:

    - Biodiversity impacts and opportunities to avoid and retain native vegetation consistent with the biodiversity values identified in Figure 22;
    - Impacts on Four Mile Creek and matters regarding flooding and Aboriginal Cultural Heritage;
    - Provision of open space
    - Provision of utilities and infrastructure including the provision of a high-level road hierarchy and location of key intersections and creek crossing; and
    - Staging and sequencing of development.

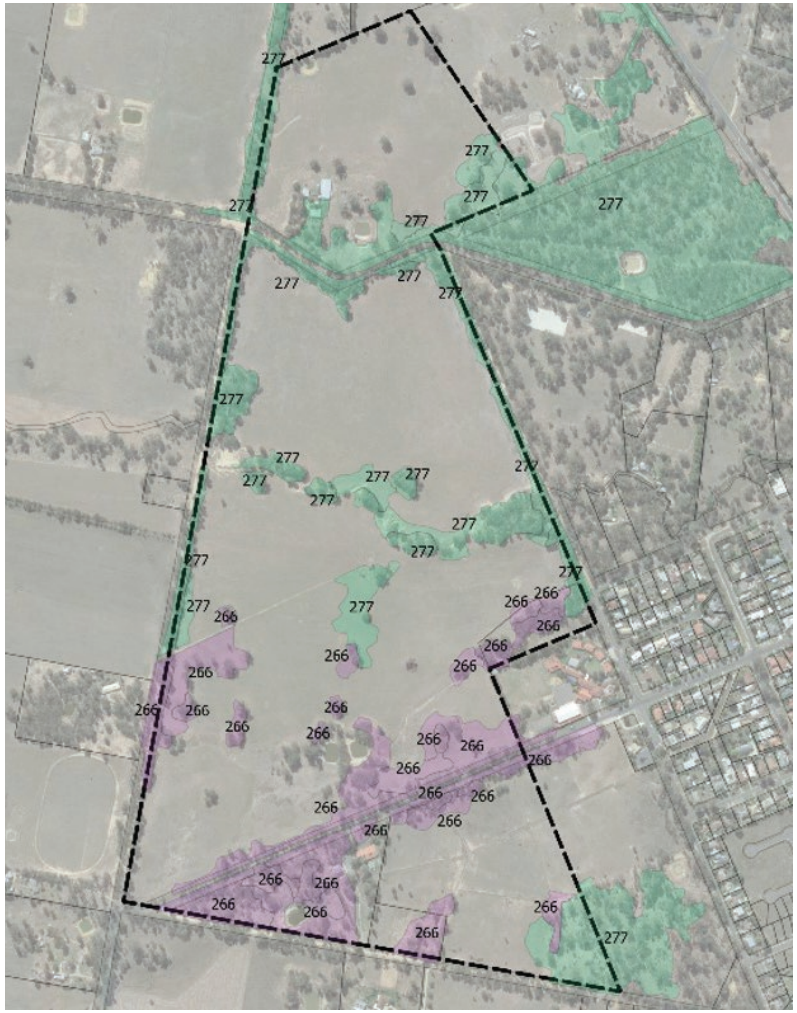

Figure 22 - Biodiversity Values Map