

# CHAPTER 12

## Land use and property

ALBURY TO ILLABO ENVIRONMENTAL IMPACT STATEMENT

ARTC

INLAND  
RAIL  
An Australian Government Initiative

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## 12. Land use and property

This chapter provides an assessment of the potential land use and property impacts associated with the Albury to Illabo (A2I) section of the Inland Rail program (the proposal).

### 12.1 Summary

The proposal site consists primarily of the existing active rail corridor between Albury and to the north-east of Illabo, which is owned by the NSW Government and leased, managed and operated by ARTC. The rail corridor is part of the Main South Line, which is used for transport of both freight and passenger trains between Melbourne and Sydney. Inland Rail is identified in strategic planning policies, such as the *Riverina Murray Regional Plan 2036*, as providing an essential role in freight and logistic hubs within the region.

Construction of the proposal would require the temporary occupation of around 27 hectares (ha) of land outside the rail corridor, which primarily consists of road reserves and open areas adjacent to the enhancement sites. Other land uses that would be temporarily impacted are public recreation; industrial; commercial and commercial accommodation (including the rear of a service station and vacant properties); educational; residential (currently vacant); and agricultural. The area temporarily required for the proposal at each property generally consists of a small portion of the total property and would not impact ongoing use, viability, or productivity of the broader property during construction. The exception to this would be the Billy Hughes bridge enhancement site, where a private property would be required. However, this property is currently leased for sheep grazing and forms part of a broader lease totaling around 200 ha. As with all privately owned land required for construction, ARTC would enter into a lease or other agreement for the use of land and would restore the property to a condition as determined in that agreement.

Key impacts to land use during construction are temporary loss of access to open areas; access impacts from level crossing and bridge works; construction areas intersecting with the grain terminal operational area; and increased biosecurity risks from construction activities. Potential property access impacts were raised as a key concern for community and councils during engagement with key stakeholders. Mitigation measures, developed in conjunction with community and stakeholder consultation, would be implemented to minimise these impacts.

No privately owned land is proposed to be permanently acquired for the proposal. An easement (25 m wide) would be established in the north-eastern corner of a private property (Lot 2 DP543801) at the Edmondson Street bridge enhancement site to accommodate a relocated electrical power line. The proposal has been designed to minimise impacts to private property during construction, including the following:

- ▶ selection of a temporary creek crossing at the Uranquinty Yard clearances enhancement site to avoid the need for access via a private agricultural property
- ▶ construction access to Cassidy Parade pedestrian bridge is prioritised from Fox Street to minimise impacts to the Telstra depot property on Brookong Avenue
- ▶ adjustments to Cassidy Parade pedestrian bridge to avoid direct impacts on the Erin Earth Centre property.

A reconfiguration of open space at Kemp Street bridge enhancement site would be required to accommodate the altered intersection at this location. At the completion of construction, there would be no net loss of open space, with additional open space created between the Olympic Highway and the rail corridor; however, the eastern portion of Endeavour Park would be reduced by about 50 square metres (m<sup>2</sup>). The landscaping and urban design of this space would be refined in consultation with Junee Shire Council during detailed design.

### 12.2 Approach

#### 12.2.1 Secretary's Environmental Assessment Requirements

The Secretary's Environmental Assessment Requirements (SEARs) related to land use and property impacted by the proposal, and where in the environmental impact statement (EIS) these requirements have been addressed, are detailed in Appendix A: Secretary's Environmental Assessment Requirements.

#### 12.2.2 Relevant legislation, policies and guidelines

The assessments were undertaken in accordance with the SEARs and with reference to the requirements of relevant legislation, policies and/or assessment guidelines, including:

- ▶ *Land Acquisition (Just Terms Compensation) Act 1991* (NSW)
- ▶ *Biosecurity Act 2015* (NSW)

- ▶ The local environmental plans that apply to the study area—Albury Local Environmental Plan 2010, Greater Hume Environmental Plan 2012, Lockhart Environmental Plan 2012, Wagga Wagga Environmental Plan 2010 and Junee Environmental Plan 2012
- ▶ Regional and local planning strategies that apply to the study area—*Riverina Murray Regional Plan 2036* (DPIE, 2017), Local Strategic Planning Statements and precinct plans
- ▶ *Agricultural impact statement technical notes* (NSW Department of Primary Industries (DPI), 2013a)
- ▶ *Infrastructure proposals on rural land* (DPI, 2013b)
- ▶ *Land use conflict risk assessment guide* (DPI, 2011)
- ▶ *Managing biosecurity risks in land use planning and development guide* (DPI, 2020)
- ▶ *NSW Invasive Species Plan 2018–2021* (DPI, 2018b)
- ▶ *Riverina Regional Strategic Weed Management Plan 2017–2022* (Riverina Local Land Services, 2017)
- ▶ *Riverina Regional Strategic Pest Animal Management Plan 2018–2023* (Riverina Local Land Services, 2018).

## 12.2.3 Methodology

### Study area

The assessment considered land use and property impacts of the proposal site and adjacent areas, along with wider land uses across the five Local Government Areas (LGAs): Albury, Great Hume, Lockhart, Wagga Wagga and Junee.

### Key tasks

The assessment of land use and property included:

- ▶ reviewing existing land use within the study area, through:
  - ▶ relevant land use and planning controls (land use zones) in the study area
  - ▶ aerial imagery, and observations made during site visits and completion of field surveys as part of other technical assessment to confirm land uses within the study area
  - ▶ exploration and mining licenses related to mineral resources and extractive industries
  - ▶ native title searches
  - ▶ identification of strategic agricultural land as identified under the NSW Government's *Strategic Regional Land Use Policy* (2015), conservation reserves, Crown land, travelling stock reserves, roads, waterfront land, and recreational land uses (including fishing)
- ▶ reviewing key strategic planning policies and documents relevant to the study area to identify future land uses and developments
- ▶ identifying agricultural land within and adjacent to the proposal site, with consideration of physical characteristics and agricultural activities
- ▶ identifying properties located within the proposal site, and assessing the potential impacts of construction and operation, including temporary and permanent land requirements
- ▶ identifying biosecurity risks associated with the construction and operation of the proposal including weeds, disease and pest control
- ▶ assessing of the potential land use impacts during construction and operation
- ▶ identifying measures to avoid, minimise and manage the potential impacts identified.

## 12.2.4 Key risks

An environmental risk assessment was undertaken for the proposal (refer to Appendix E: Environmental risk assessment), which includes consideration of land use and property impacts. The *Land Use Conflict Risk Assessment guideline* (DPI, 2011) was used to inform the environmental risk assessment (DPI, 2011). Land Use Conflict Risk Assessment is a system to identify and assess the potential for land use conflict to occur between neighbouring land uses.

The land use and property risks with an overall assessed risk rating of medium or above are:

- ▶ temporary changes to land use as a result of the proposal's land requirements during construction—temporary leasing of additional areas outside rail corridor to facilitate construction negatively affects the availability of land for other uses



- ▶ effects on access to and within properties as a result of changes to private access roads and internal access arrangements
- ▶ indirect impacts on agricultural land use/production and livestock from construction activities, including impacts from changes to access, noise and air pollution
- ▶ the movement of construction machinery and materials introduces biosecurity risks, including the spread of weeds, pests and diseases
- ▶ impacts on utilities.

## 12.3 Existing environment

### 12.3.1 Land uses within the study area

Albury, Greater Hume, Lockhart, Wagga Wagga and Junee LGAs are within the Riverina Murray region in the south west of NSW. The main land use in the study area is agricultural. Residential, commercial and industrial land uses are focused around the regional urban centres of Albury and Wagga Wagga. Smaller residential and rural towns are located around the study area including along the Main South Line rail corridor. These smaller residential townships provide accommodation, education and basic services predominately for residents and workers from the surrounding area.

A summary of the land uses within the study area from the (then) Department of Planning, Industry and Environment's (DPIE) NSW Land Use Dataset (DPIE, 2017) are provided in Table 12-1.

**TABLE 12-1 LAND USES WITHIN THE STUDY AREA**

Land use	Area (ha)	Study area (per cent)
Cropping	877,123	56%
Grazing modified pastures	249,557	16%
Grazing native vegetation	236,924	15%
Other land uses <sup>1</sup>	215,986	13%

Source: DPIE, 2017

1. Other land uses included, nature conservation, native forestry, residential and farm infrastructure, plantation forests, managed resource protection, river, transport and communication, marsh/wetland, irrigated cropping, lake, services, manufacturing and industrial, intensive animal production, mining, reservoir/dam, waste treatment and disposal, horticulture, land in transition and utilities.

### Agricultural land use within the study area

The study area is within the Riverina Murray region of NSW. The Riverina Murray region is the largest regional contributor to agricultural production in the NSW with a diverse and successful agricultural sector due to its temperate to semi-arid climate, water resources, soils, transport infrastructure and reasonable land prices (DPI, 2018a). Three major irrigation areas are in the Riverina Murray region; however, none of these are in the study area.

Agricultural activities occurring in the vicinity of the study area (DPIE, 2017) included:

- ▶ cropping (dryland)
- ▶ grazing (livestock) including wool and meat
- ▶ horticulture (grapes and turf)
- ▶ intensive livestock production including dairy, poultry for eggs and meat, and pig production.

The main agricultural products in the vicinity of the study area in 2017 were wool; winter crops, particularly cereals such as wheat; and meat from grazing.

The majority of the proposal site is not on agricultural land.

Two enhancement sites partly traverse agricultural land: the Billy Hughes bridge and Junee to Illabo clearances enhancement sites. The proposal is also adjacent to agricultural land outside of the main townships of the existing rail corridor. The agricultural land within the Billy Hughes bridge enhancement site is zoned for industrial use but is currently used for grazing under a lease. This land is set to be included in a new industrial precinct as part of the *Albury City Local Strategic Planning Statement* (Albury City Council, 2020), see section 12.3.4. At the Junee to Illabo clearances enhancement site, the small areas of land that would be traversed by the proposal are comprised of access tracks and vegetation along the existing rail corridor fence line and are largely confined to crown land. There is no further agricultural land within the proposal area.

## Land and soil capability

Land and soil capability have been classified and mapped according to the ability of the land to sustain and remain stable under particular land uses (Office of Environment and Heritage (OEH), 2012). Class 1 represents land capable of sustaining most land uses (including those that have a high impact on the soil), and Class 8 represents land that can only sustain very low-impact land uses. A majority of the study area is mapped Class 3 (moderate limitations) and class 4 (moderate to severe limitations). These categories are defined as:

- ▶ Class 3 — *'high capability land: Land has moderate limitations and is capable of sustaining high-impact land uses, such as cropping with cultivation, using more intensive, readily available and widely accepted management practices'* (OEH, 2012)
- ▶ Class 4 — *'moderate capability land: Land has moderate to high limitations for high-impact land uses. Will restrict land management options for regular high-impact land uses such as cropping, high-intensity grazing and horticulture'* (OEH, 2012)

The Billy Hughes bridge enhancement site is mapped as Class 4 land and Junee to Illabo clearances enhancement site is mapped Class 3 and Class 4 land.

Biophysical strategic agricultural land (BSAL) is land with high-quality soil and reliable water resources capable of sustaining high levels of agricultural productivity. Mapping BSAL is another NSW Government method of safeguarding high-quality agricultural land, particularly from extractive industries. BSAL mapped land is located to the north and east of Wagga Wagga, around 1 km from the proposal site.

## Biosecurity

The productivity and profitability of agricultural production depends, in part, on the management of pests, pathogens and diseases, including the prevention of incursion of pests and diseases onto properties. Biosecurity is a term that is commonly used for such management and the set of measures adopted to protect a property from the entry and spread of pests, diseases and weeds.

The *Biosecurity Act 2015* (NSW) provides a framework for managing biosecurity risks. The Biosecurity Regulation 2017 (NSW) under the Act establishes biosecurity zones to manage high-priority weeds, pests or diseases. The study area is located partially within the following biosecurity zones:

- ▶ Phyloxera Exclusion Zone, which bans taking grapevines, cuttings or budwood into this zone
- ▶ Potato Biosecurity Zone, which bans the movement of restricted matter to prevent the spread of potato cyst nematode, potato spindle tuber viroid, powdery scab and bacterial wilt
- ▶ weed biosecurity zones for alligator weed, bitou bush, water hyacinth where a landowner or occupier must notify their local control authority of a suspected presence of a new infestation of the weed and take action to eradicate those weeds or destroy as much as practicable.

The *Murray Regional Strategic Weed Management Plan 2017–2022* (Murray Local Land Services, 2017) and the *Riverina Regional Strategic Weed Management Plan 2017–2022* (Riverina Local Land Services, 2017) provide a framework for weed management across the Riverina Murray region and identify priority weeds in the region, including weeds of national significance (WoNS). Several weeds were identified in and around the proposal site during the biodiversity field surveys, as described in Chapter 16: Biodiversity.

*Murray Regional Strategic Pest Animal Plan 2018–2023* (Murray Local Land Services, 2018) and the *Riverina Regional Strategic Pest Animal Plan 2018–2023* (Riverina Local Land Services, 2018) guide protection of the environment, community and economy from the negative impacts of pest animals. Priority pest species such as feral pigs, feral cats, rabbits, wild dogs, mice, locusts, foxes are identified in the study area.

Potential impacts from the introduction of a new weed, pest or disease and how it could affect the agricultural use and production of agricultural land is discussed in section 12.4.3.

### 12.3.2 Land uses within the proposal site

The proposal site consists primarily of the existing active rail corridor between Albury and to the north-east of Illabo, which is owned by the NSW Government and leased, managed and operated by ARTC. The rail corridor is part of the Main South Line, which is used for transport of both freight and passenger trains between Melbourne and Sydney. Under the local environmental plans, the proposal site is predominantly on land zoned Infrastructure (SP2). The objectives of the SP2 land zoning are to provide for transport infrastructure and related land use. The land zoning of each enhancement site is shown in Figure 12-1 to Figure 12-5 and land uses of each enhancement site based on NSW Land Use Dataset (2017) is shown in Figure 12-6 to Figure 12-10.

The proposal site includes some additional areas outside the rail corridor that are primarily required for construction activities. The proposed temporary occupation and use of these areas are subject to further engagement and agreement with landowners. Initial discussions about establishing agreements with landowners for the proposal's property requirements commenced in March 2022. As discussions are ongoing, the location and area of individual property requirements may change or be removed. The final land requirements for the proposal would be confirmed

during detailed design. These areas located adjacent to the rail corridor are described in Table 12-2 and detailed in Appendix G: Preliminary land requirements.

**TABLE 12-2 LAND IN THE PROPOSAL SITE OUTSIDE THE RAIL CORRIDOR**

Enhancement site	Additional land outside rail corridor	Land use	Lot/DP	Approximate area (ha) <sup>1</sup>
<b>Albury precinct</b>				
Murray River bridge	Townsend Street	Transport infrastructure	N/A	0.13
Albury Station pedestrian bridge	Kenilworth Street and pedestrian pathways	Transport infrastructure	N/A, Lot 2/DP1172095 and Lot 3/DP1172095	0.19
Billy Hughes bridge	Privately owned industrial land (currently used for grazing)	Industrial and agricultural	Lot 8/DP264463	5.48
	Road reserve	Transport infrastructure and environmental management	N/A, Lot 20/DP862667, Lot 21/DP862667, Lot 602/DP1163923 and Lot 609/DP1163923	2.6
<b>Total</b>				<b>8.4</b>
<b>Greater Hume, Lockhart precinct</b>				
Culcairn Yard clearances	Grain terminal adjacent to rail corridor used to load and unload grain from trains	Transport infrastructure	Lot 2/DP819838	0.08
Henty Yard clearances	Sladen Street	Transport infrastructure	N/A	0.14
Yerong Creek Yard clearances	Plunkett Street	Transport infrastructure	N/A	0.02
<b>Total</b>				<b>0.24</b>
<b>Wagga Wagga precinct</b>				
Uranquinty Yard clearances	Grain terminal adjacent to rail corridor used to load and unload grain from trains	Transport infrastructure	Lot 1/DP819900	0.09
Pearson Street bridge	Wagga Wagga City Council depot	Industrial	Lot 5/DP632012	0.49
	Wagga Wagga Showground campground	Commercial accommodation	Lot 1/DP62738	0.31
	Council reserve and access road	Transport infrastructure	N/A and Lot 5/DP802891	0.35
Cassidy Parade pedestrian bridge	Access roads and footpaths off Brookong Ave and Donnelly Avenue	Transport infrastructure	N/A	0.05
	Cassidy Parade and Kildare Street road reserve and playground	Public recreation and transport infrastructure	N/A and Lot 12/DP1136467	0.13
	Telstra facility	Telecommunications infrastructure	Lot 1/DP602344	0.02
Edmondson Street bridge	Edmondson Street, Erin Street, Best Street and Little Best Street (Council road reserve)	Transport infrastructure	N/A	1.01
	Landscaped area on the edge of Mount Erin Heritage Centre, chapel, boarding school and catholic college	Education and community services	Lot 2/DP543801	0.08
Wagga Wagga Station pedestrian bridge	Car park of Multicultural Council of Wagga Wagga Centre <sup>2</sup>	Education and community services	Lot 13/ DP1043109	0.08
Bomen Yard clearances	Road reserve adjacent to Byrnes Road	Transport infrastructure	N/A	0.03

Enhancement site	Additional land outside rail corridor	Land use	Lot/DP	Approximate area (ha) <sup>1</sup>
<b>Total</b>				2.64
<b>Junee precinct</b>				
Harefield Yard clearances	Road reserve (closed road) <sup>3</sup> and intermodal terminal	Transport infrastructure	N/A	0.07
Kemp Street bridge	Council and state road reserve, Junee Recreation and Aquatic Centre, and Endeavour Park	Transport infrastructure and public recreation	N/A, Lot 4/DP946, Lot 1 and 2/DP914183, Lot 1/DP431538 and Lot 1/111283	2.11
	Vacant private property	Residential/commercial	Lot 5 and 6/DP1080992 and Lot 2/DP908405	0.08
Olympic Highway underbridge	Service station	Commercial	Lot 1/DP808840	0.22
	Road reserve (off Regent Street)	N/A	N/A	0.13
	Open parkland (off Illabo Street) <sup>2</sup>	Public recreation	N/A	0.14
Junee Yard clearances	Railway Square road reserve	Transport infrastructure	N/A	0.03
Junee to Illabo clearances	Grain terminal adjacent to rail corridor used to load and unload grain from trains and associated property	Transport infrastructure	Lot 1/DP819498, Lot 1/DP819697 and Lot 1/DP554876	1.76
	Road reserve and Crown land along rail corridor	Transport infrastructure	N/A, Lot 1/DP1074460, Lot 2/DP 983804 and Lot 701/DP94371	11.51
<b>Total</b>				16.08
<b>TOTAL</b>				<b>27.33</b>

1. A detailed survey is required to confirm final areas given limitations of the existing cadastre in some locations
2. This is on ARTC leased land; however, it is included in this table given its use is not for rail purposes (community).
3. Road reserve adjacent to Byrnes Road at Harefield is undergoing boundary adjustments and may be subject to change.



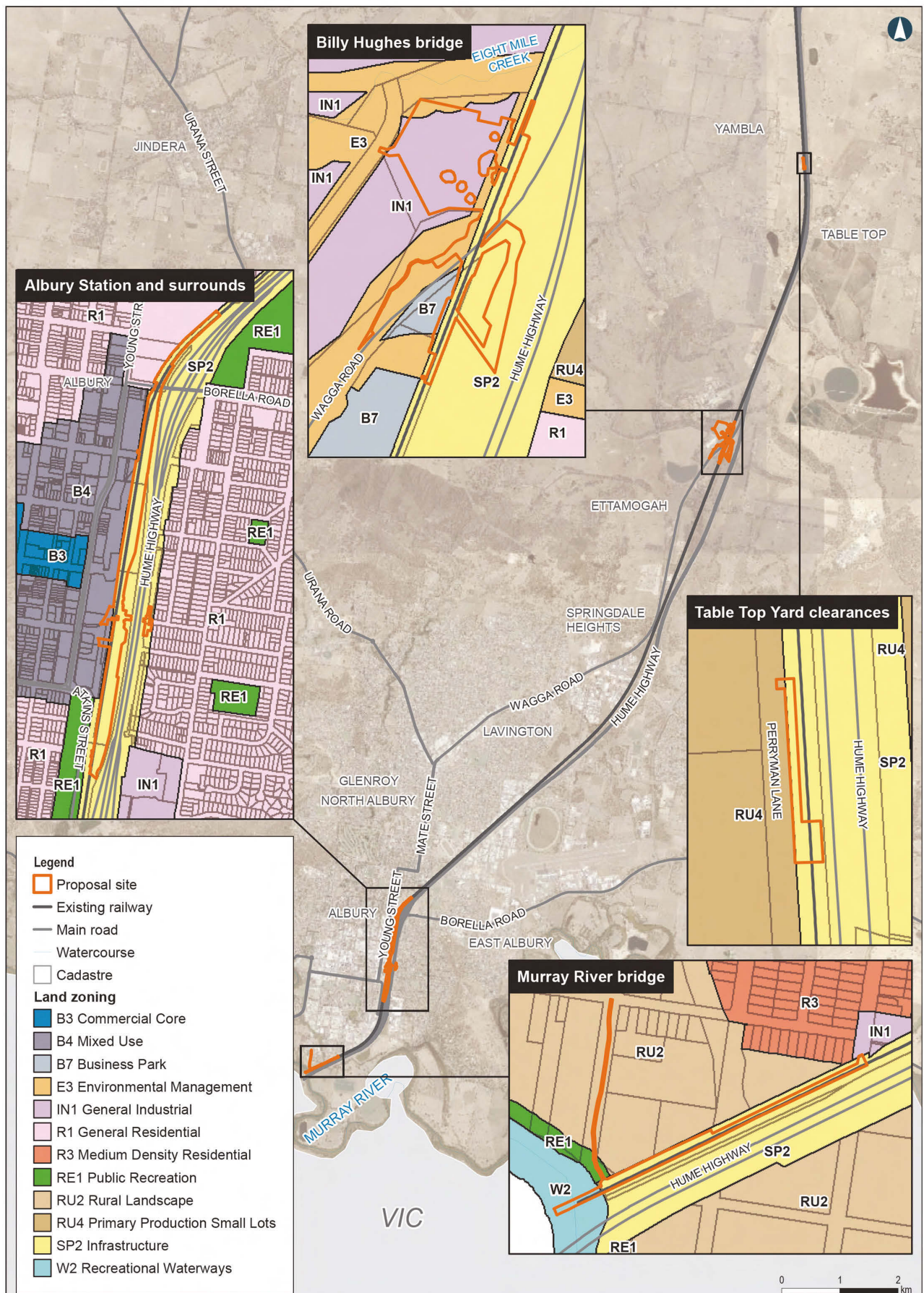
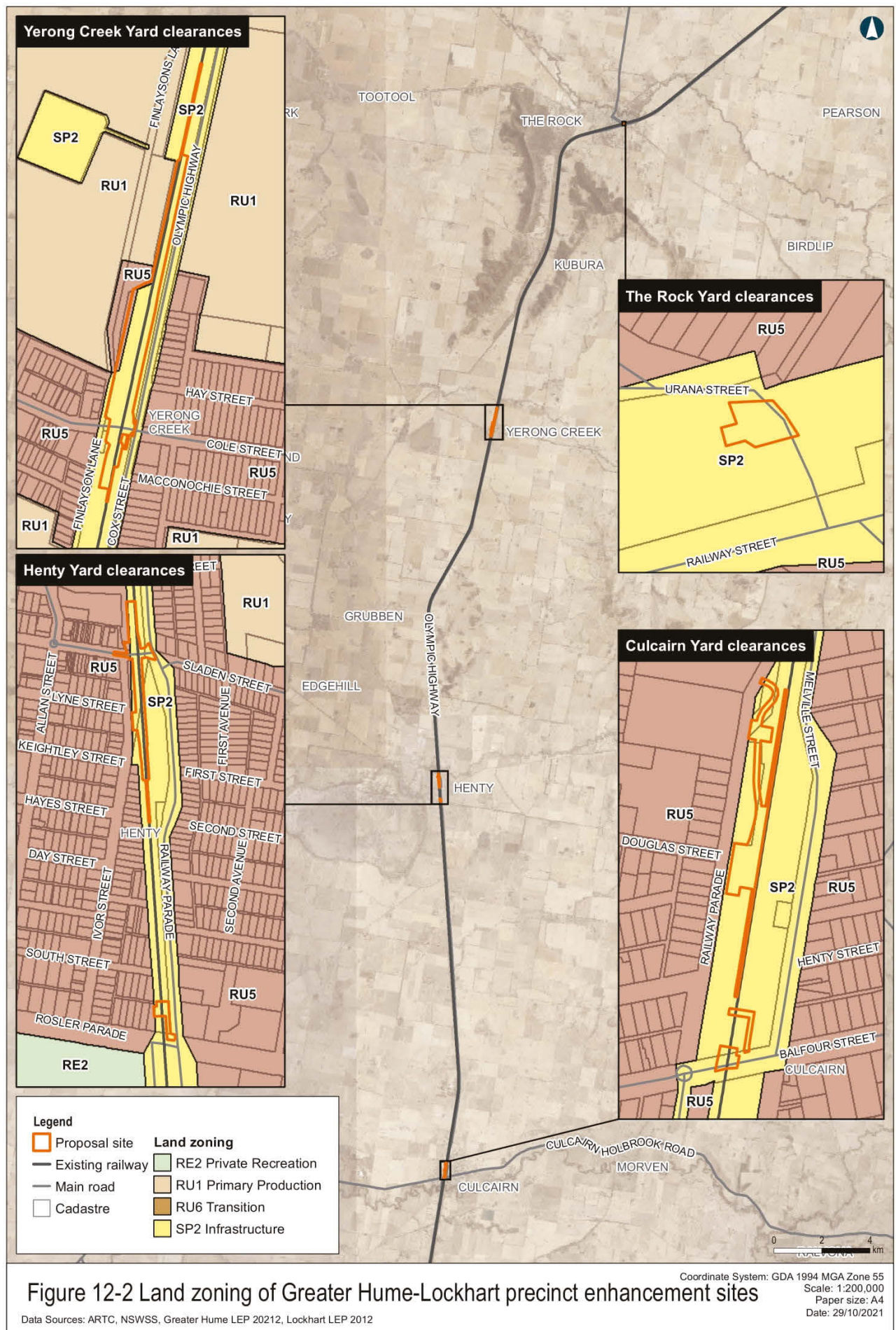


Figure 12-1 Land zoning of Albury precinct enhancement sites

Data Sources: ARTC, NSWSS, Albury LEP 2010

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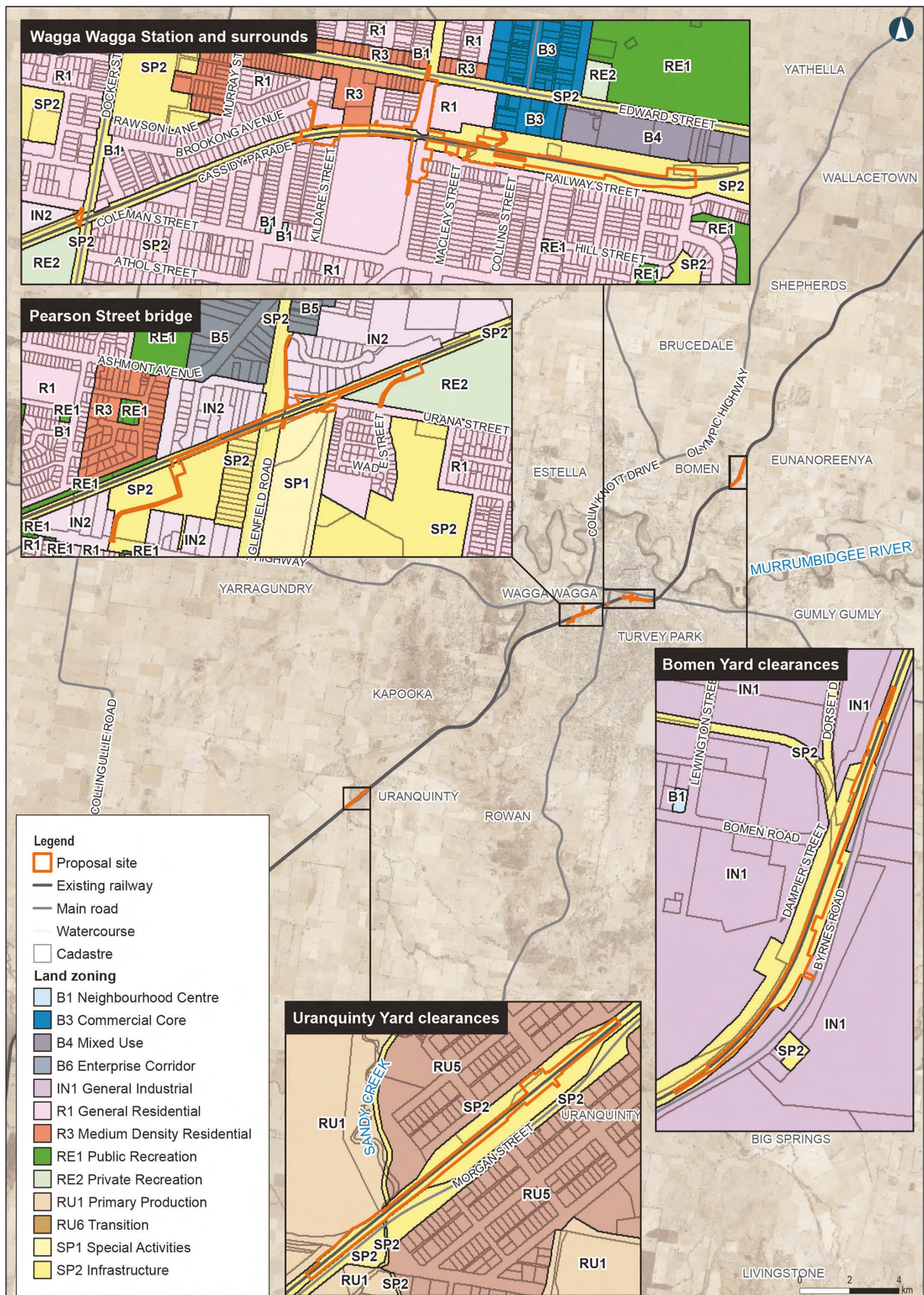


Figure 12-3 Land zoning of Wagga Wagga precinct enhancement sites

Data Sources: ARTC, NSWSS, Wagga Wagga LEP 2010

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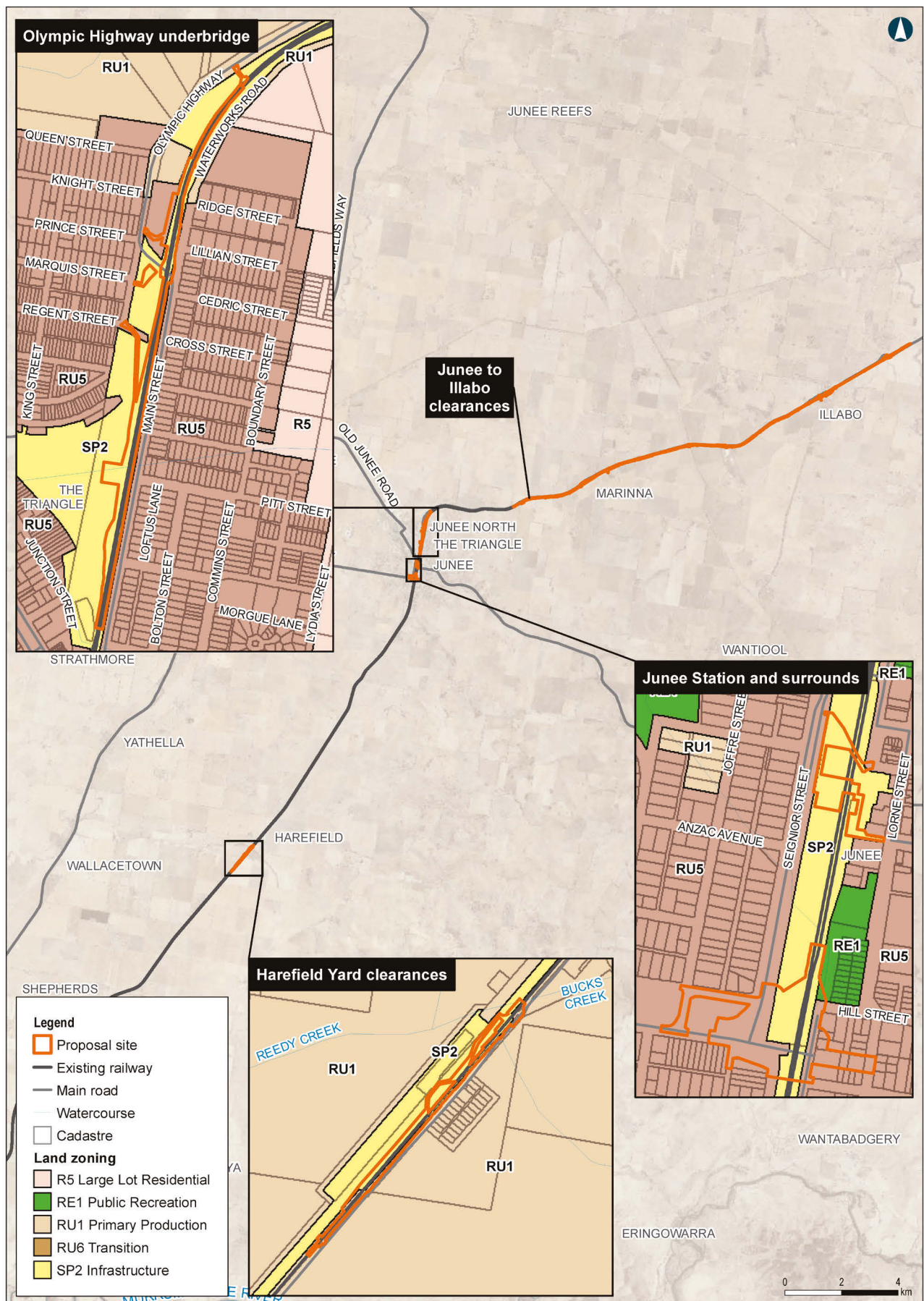
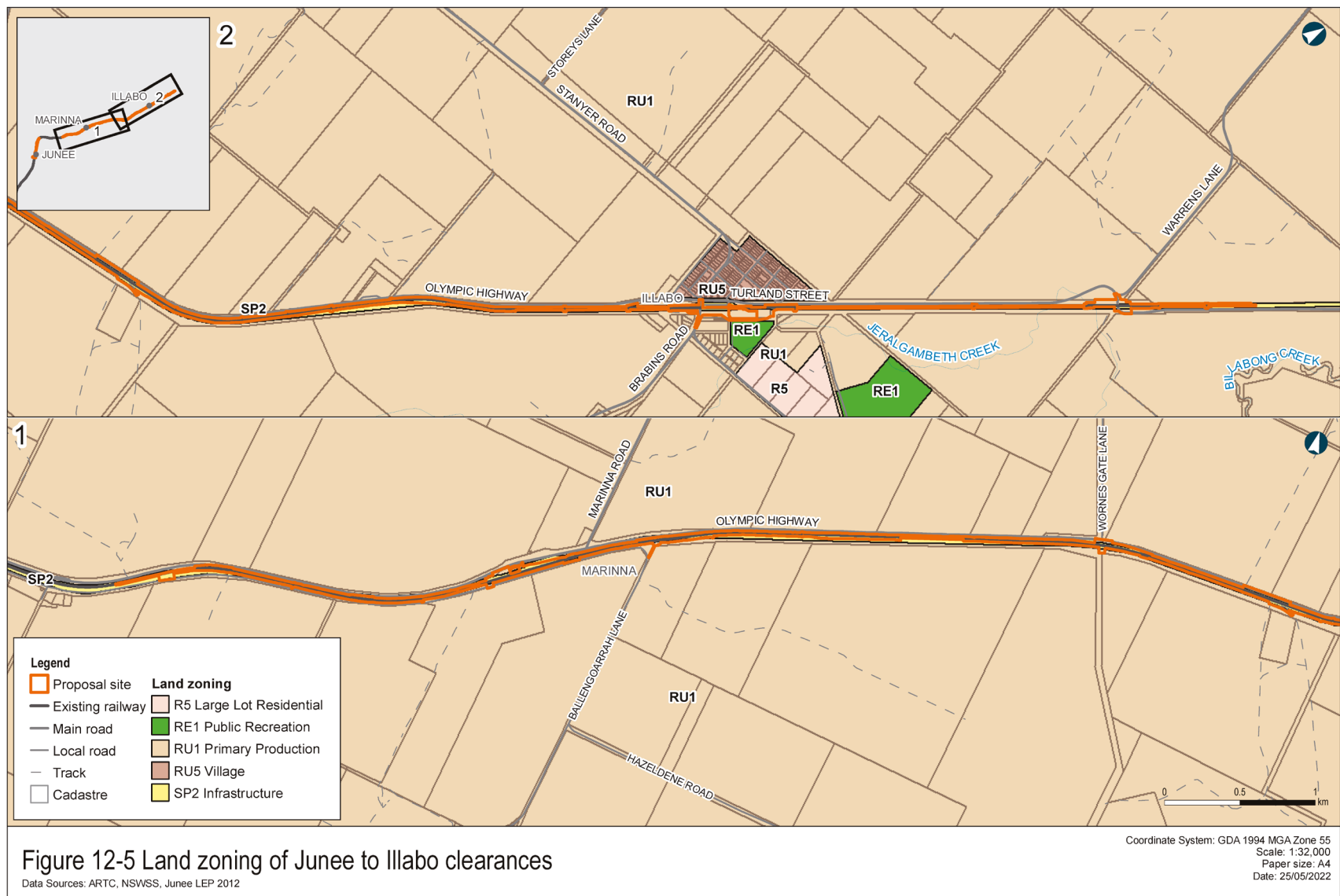


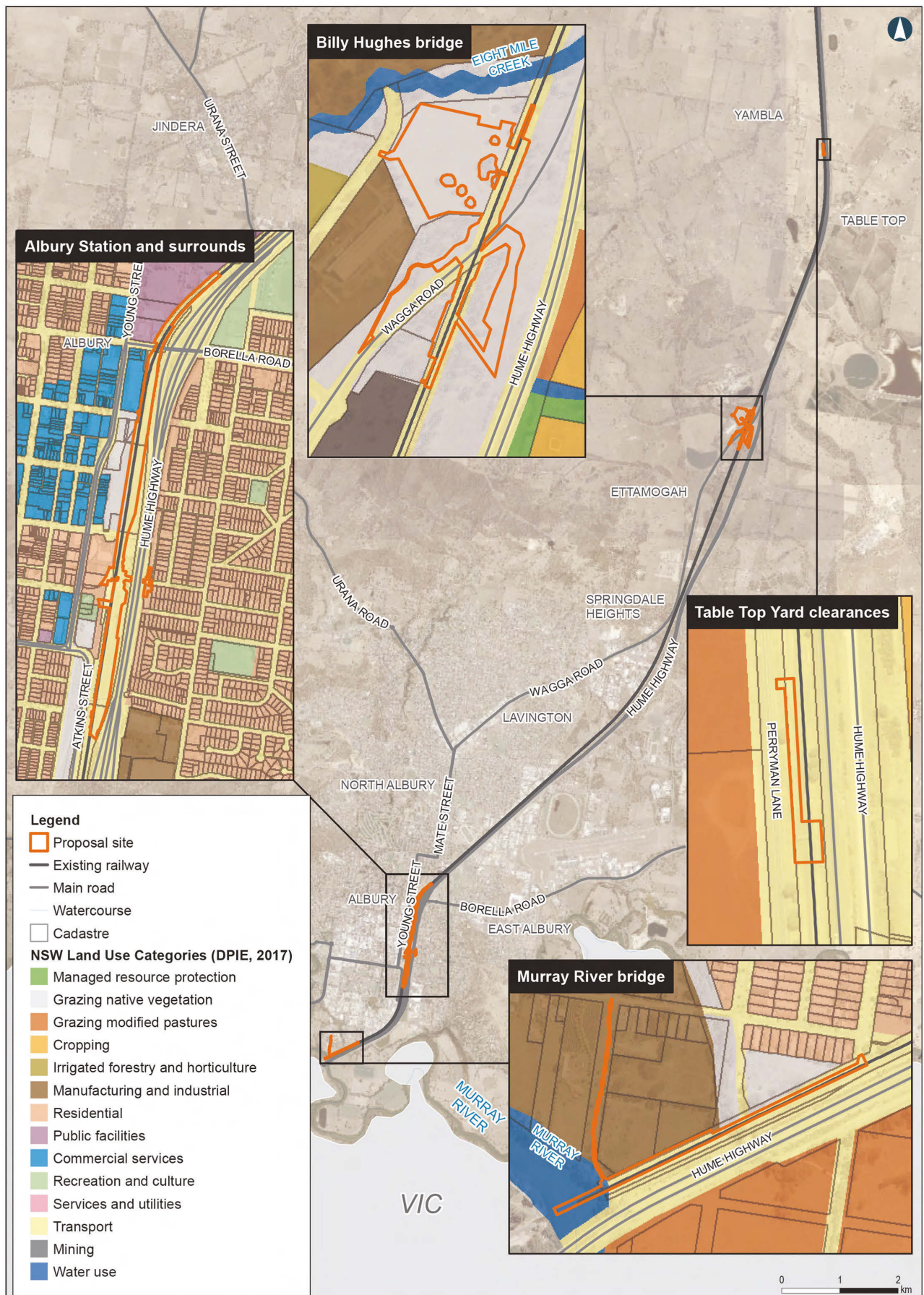
Figure 12-4 Land zoning of Junee precinct enhancement sites

Data Sources: ARTC, NSWSS, Junee LEP 2012

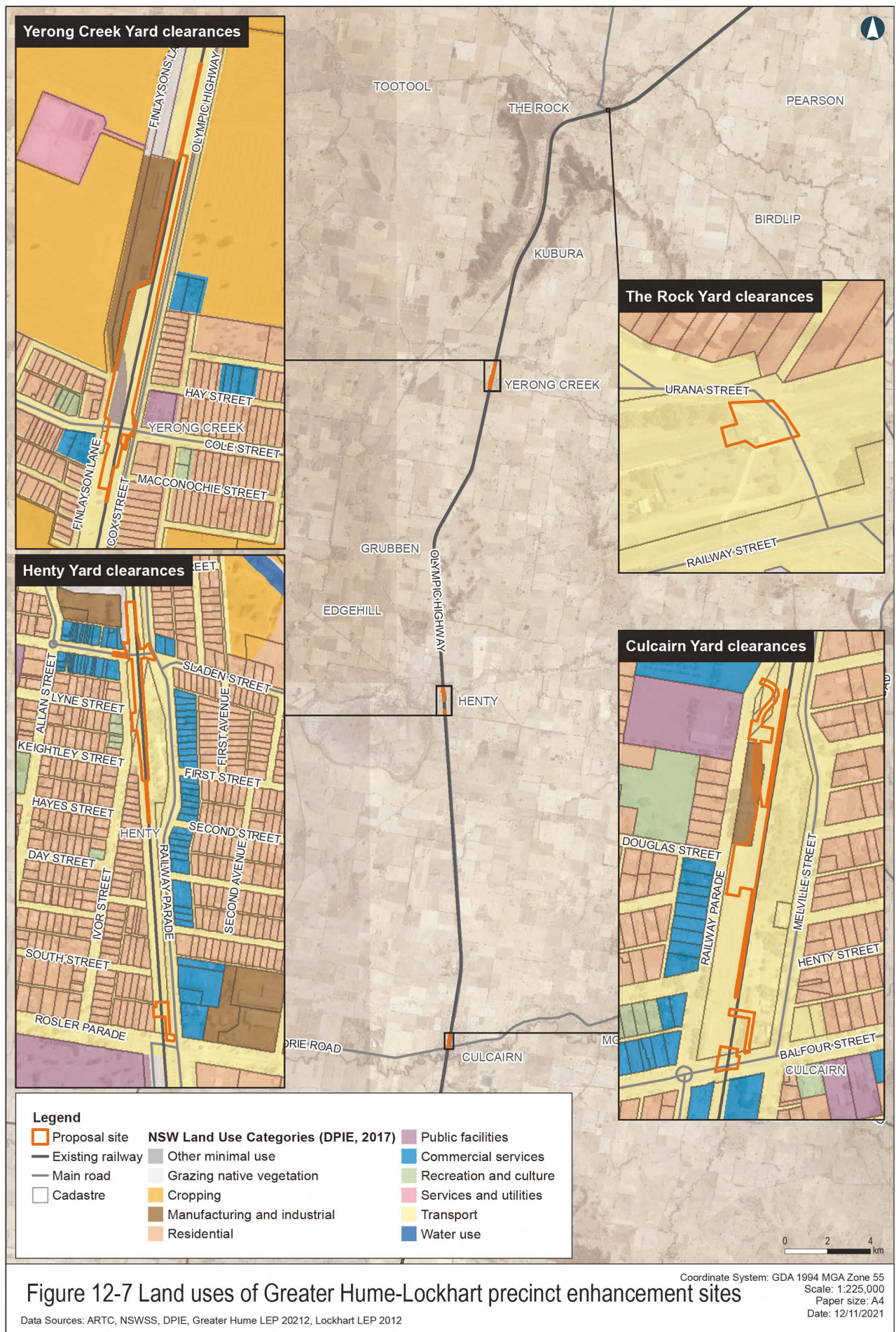
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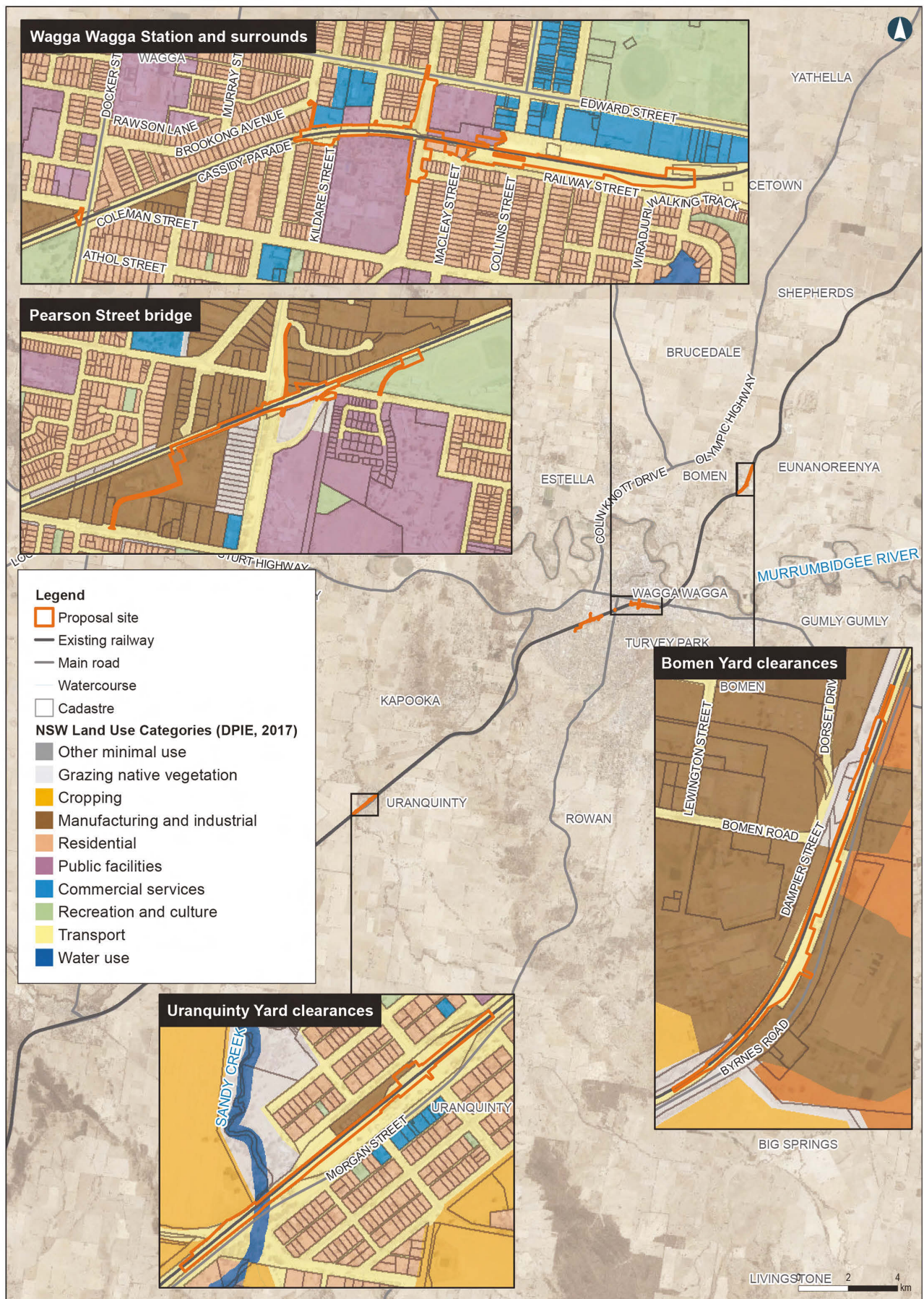


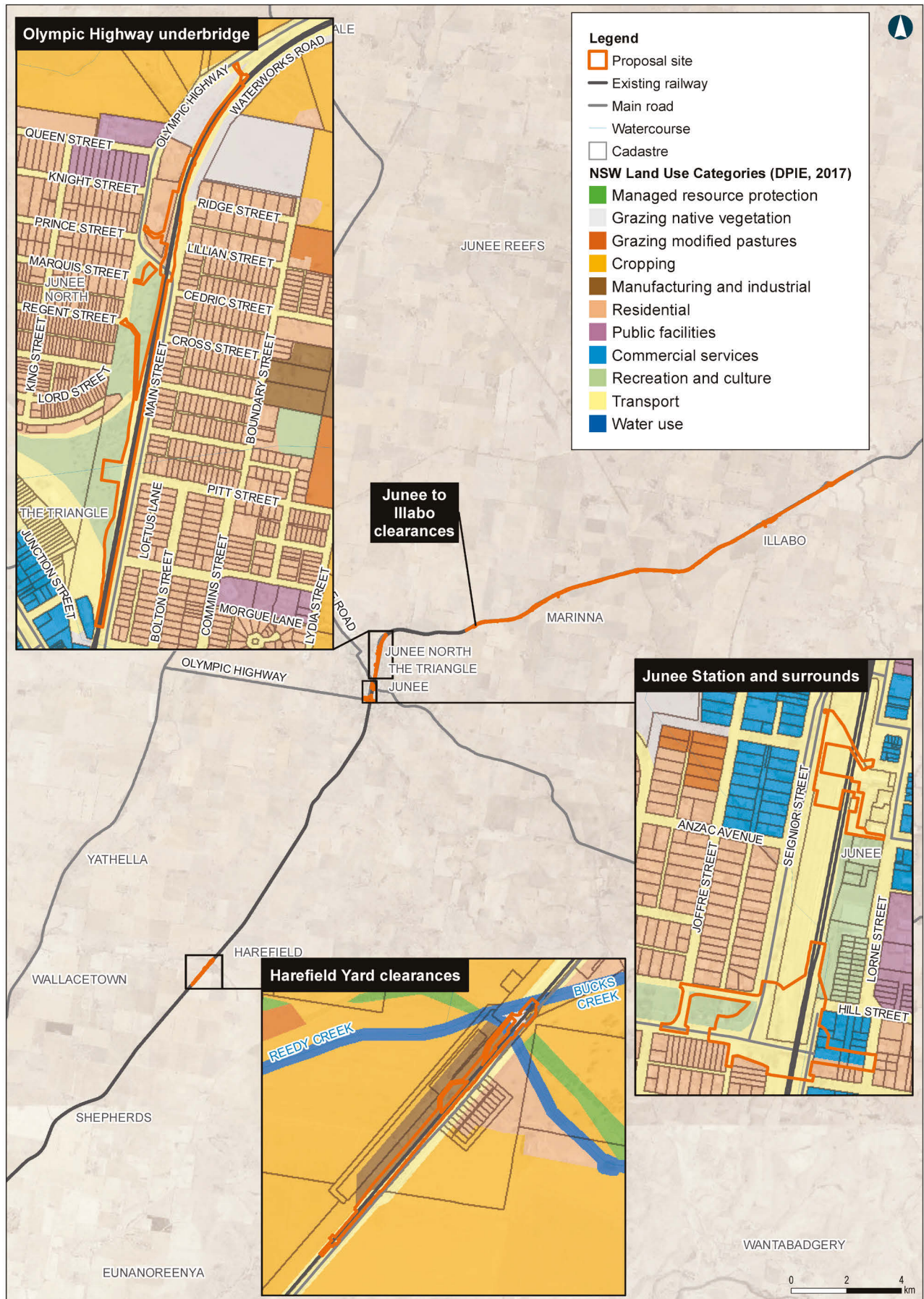
Figure 12-8 Land uses of Wagga Wagga precinct enhancement sites

Data Sources: ARTC, NSWSS, DPIE, Wagga Wagga LEP 2010

Coordinate System: GDA 1994 MGA Zone 55  
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Paper size: A4  
Date: 14/12/2021

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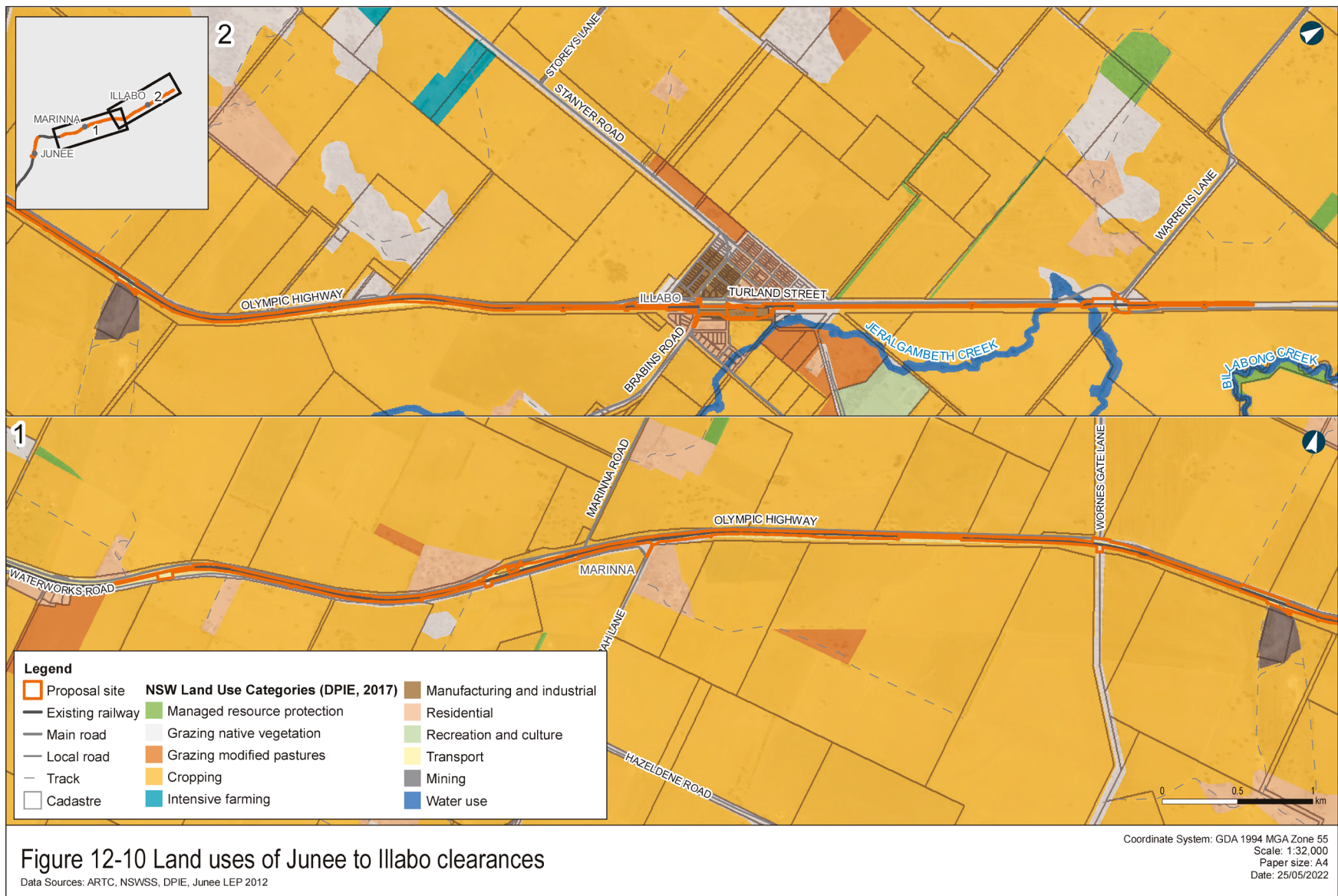
**Figure 12-9 Land uses of Junee precinct enhancement sites**

Data Sources: ARTC, NSWSS, DPIE, Junee LEP 2012

Coordinate System: GDA 1994 MGA Zone 55  
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Paper size: A4  
Date: 19/02/2022

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### 12.3.3 Surrounding land uses to the proposal site

The proposal site is generally located within the regional urban centres of Albury and Wagga Wagga and within small towns along the rail corridor. The main nearby land uses for most enhancement sites are residential and transport infrastructure related to road and rail. Other land uses present in the areas adjacent or near to the proposal site include residential, agricultural, industrial, commercial, community and education facilities, and public recreation. Land uses surrounding the proposal enhancement sites are shown in Figure 12-6 to Figure 12-10.

#### Residential

All sites are within close proximity to medium- and low-density residential areas with the exception of Billy Hughes bridge, Table Top Yard clearances and Bomen Yard clearances enhancement sites. A majority of the Junee to Illabo clearances enhancement sites are not located in close proximity to residential properties; however a small section of the site travels through the town of Illabo. The highest number of residential properties are generally located around the enhancement sites within the urban centre of Albury and Wagga Wagga.

#### Agricultural land

The agricultural activities occurring along the rail corridor are primarily dryland cropping and grazing of modified pastures (DPIE, 2017a).

Several of the enhancement sites are located adjacent to agricultural land, including Murray River bridge, Billy Hughes bridge, Yerong Creek Yard clearances, Uranquinty Yard clearances, Bomen Yard clearances, Olympic Highway underbridge and Junee to Illabo clearances.

#### Industrial

The proposal site is located within or adjacent to industrial land in the Albury, Wagga Wagga, Greater Hume–Lockhart and Junee precincts.

In the Albury precinct, the Murray River bridge enhancement site has light industry directly east on the edge of the Albury urban centre. At the Billy Hughes bridge enhancement site, located over 3 km north-east of Albury, is within a developing industrial area and includes existing industries such as the Visy paper mill and the recently upgraded Ettamogah Rail hub. The hub is intermodal transport facility located directly north of the Billy Hughes bridge enhancement site.

In the Wagga Wagga precinct, Pearson Street bridge enhancement site is located adjacent to industrial land within the Wagga Wagga urban area and Bomen Yard clearances enhancement site is within an industrial business park.

In the Greater Hume–Lockhart precinct, a grain storage facility is located adjacent to the Henty Yard clearances enhancement site.

In the Junee precinct, an intermodal facility is located directly adjacent to the Harefield Yard clearances enhancement site. In Junee, a light industrial area is located around 50 metres to the west of the Junee Yard clearances and Junee Station pedestrian bridge enhancement sites, and an industrial area is located around 1 km to the west of the Olympic Highway underbridge enhancement site (grain storage). A quarry operated by Junee Shire Council is located adjacent to the proposal site (LX 605), approximately 3.5 km to the south-west of Illabo.

#### Commercial

The Albury Yards, the Albury Station pedestrian bridge and the Riverina Highway bridge are located in the centre of Albury, around Albury Station. The land uses directly north of these sites include commercial and accommodation properties associated with the town centre and Albury Station.

Enhancement sites within the Greater Hume–Lockhart, Wagga Wagga and Junee precincts are in small towns with commercial properties such as bakeries, post offices, pubs and grocery stores present in small numbers. These towns include Culcairn, Henty, Uranquinty, Yerong Creek, Junee and Illabo.

Enhancement sites within the Wagga Wagga urban centre are located near commercial properties. The Wagga Wagga Showground (including campground) and Wagga Wagga greyhound track are located east of the Pearson Street bridge enhancement site. Commercial and accommodation properties associated with Wagga Wagga Station are located north of Wagga Wagga Yard clearances and pedestrian bridge enhancement site.

## Community and education

Six schools are located adjacent to the proposal site including:

- ▶ Scots School, Albury is located directly adjacent to the Riverina Highway bridge enhancement site
- ▶ Yerong Creek Public School located directly south of the Yerong Creek Yard clearances enhancement site
- ▶ Uranquinty Public school is located directly north of the Uranquinty Yard clearances enhancement site
- ▶ Kildare Catholic College and Mount Erin Boarding School (located on the same property) is located directly south of the Main South Line between the Cassidy Parade pedestrian bridge and Edmondson Street bridge enhancement sites. A small landscaped area of this property is located within the Edmondson Street bridge enhancement site
- ▶ South Wagga Public School is located west of the Edmondson Street bridge, and north of the Wagga Wagga Yard clearances and pedestrian bridge enhancement sites
- ▶ Illabo Public School north of Junee to Illabo clearances enhancement site.

Community facilities located near the proposal site include:

- ▶ Riverina Youth Justice Centre located south of the Pearson Street bridge enhancement site
- ▶ ErinEarth directly west of the Cassidy Parade pedestrian bridge enhancement site
- ▶ Mt Erin Heritage Centre, Wagga Wagga directly east of the Edmondson Street bridge enhancement site
- ▶ Multicultural Council of Wagga Wagga Centre located directly north of the Wagga Wagga Station pedestrian bridge enhancement site
- ▶ Junee Sports and Aquatic Centre is located directly east of Kemp Street bridge and Junee Yard enhancement sites.

## Public recreation

Public recreational parkland is adjacent to several enhancement sites. In some instances, parts of these recreational areas include:

- ▶ Wodonga Regional Park directly west of the Murray River bridge enhancement site
- ▶ a linear park located to the east of the Albury Yard clearances enhancement site alongside the Hume Highway
- ▶ Alexandra Park precinct at Albury, to the east of Riverina Highway bridge enhancement site
- ▶ Eric Thomas Park east of Culcairn Yard clearances and pedestrian bridge enhancement sites
- ▶ Bicentennial Park east of the Henty Yard clearances enhancement site
- ▶ Uranquinty rest area and playground and Campey Park, directly south east of Uranquinty Yard clearances enhancement site
- ▶ Endeavour Park to the west and Junee Skate Park to east of Kemp Street bridge enhancement site
- ▶ a park to the west of the rail corridor, adjacent to Illabo Road in Junee and within the Olympic Highway underbridge enhancement site.

In some instances, parts of these recreational lands would be within the proposal site.

## Waterway use

The Murray River bridge enhancement site is located over and on the eastern bank of the Murray River, which is a major navigable waterway. The foreshore areas are zoned for public recreation. The river is used for recreational watercraft activities such as kayaking, canoeing, fishing and tourism. The nearest public boat ramps are over four kilometre to the west downstream and 10 km east, upstream of the proposal site. Although fishing is generally possible along the Murray River, this section of the river near the Murray River bridge is not a known popular fishing location.

## Infrastructure

### Transport

The main infrastructure land uses near the proposal site are for rail and road transport purposes. The proposal site is adjacent to six active passenger train stations: Albury, Culcairn, Henty, The Rock, Wagga Wagga and Junee. Operational and disused grain terminals for loading freight trains with grain and other agricultural outputs are located along the rail corridor. Grain terminals are located adjacent to Culcairn Yard clearances, Uranquinty Yard clearances, Harefield Rail infrastructure (intermodal terminal), Junee and Illabo.

Enhancement sites are surrounded by state and local roads. All sites within the Albury precinct are located directly to the west of the Hume Highway, which is a major travel route between Sydney and Melbourne. A majority of the sites within the Greater Hume–Lockhart and Junee precincts are located along the Olympic Highway and other major regional roads.

#### **Other infrastructure**

Other land used for infrastructure adjacent to the proposal site includes Yerong Creek Sewage Treatment Plant, north east of Yerong Creek Yard clearances enhancement site, and the Telstra facility (telecommunications), north of Cassidy Parade pedestrian bridge enhancement site.

#### **Services and utilities**

The proposal site contains, and is located in the vicinity of, a range of gas, electricity, communications, water and wastewater services, particularly around Albury and Wagga Wagga.

### **12.3.4 Planned future land uses**

The *Riverina Murray Regional Plan 2036* (DPE, 2017) establishes a framework to grow the region's cities and local centres, support the protection of high-value environmental assets and develop a strong, diverse and competitive economy in the region. Inland Rail is identified in the plan as providing an essential role in freight and logistic hubs within the Riverina Murray region.

Local and state government has identified potential future land uses in each of the precincts as described below.

#### **Albury precinct**

Intended growth over the next 20 years is set out in the *Albury City Local Strategic Planning Statement* (Albury City Council, 2020) and is shown in Figure 12-11. The proposed enhancement sites in the Albury precinct are primarily located in the urban area of Albury or are within an expanding industrial precinct to the north of Albury at Ettamogah (Nexus Industrial Precinct).



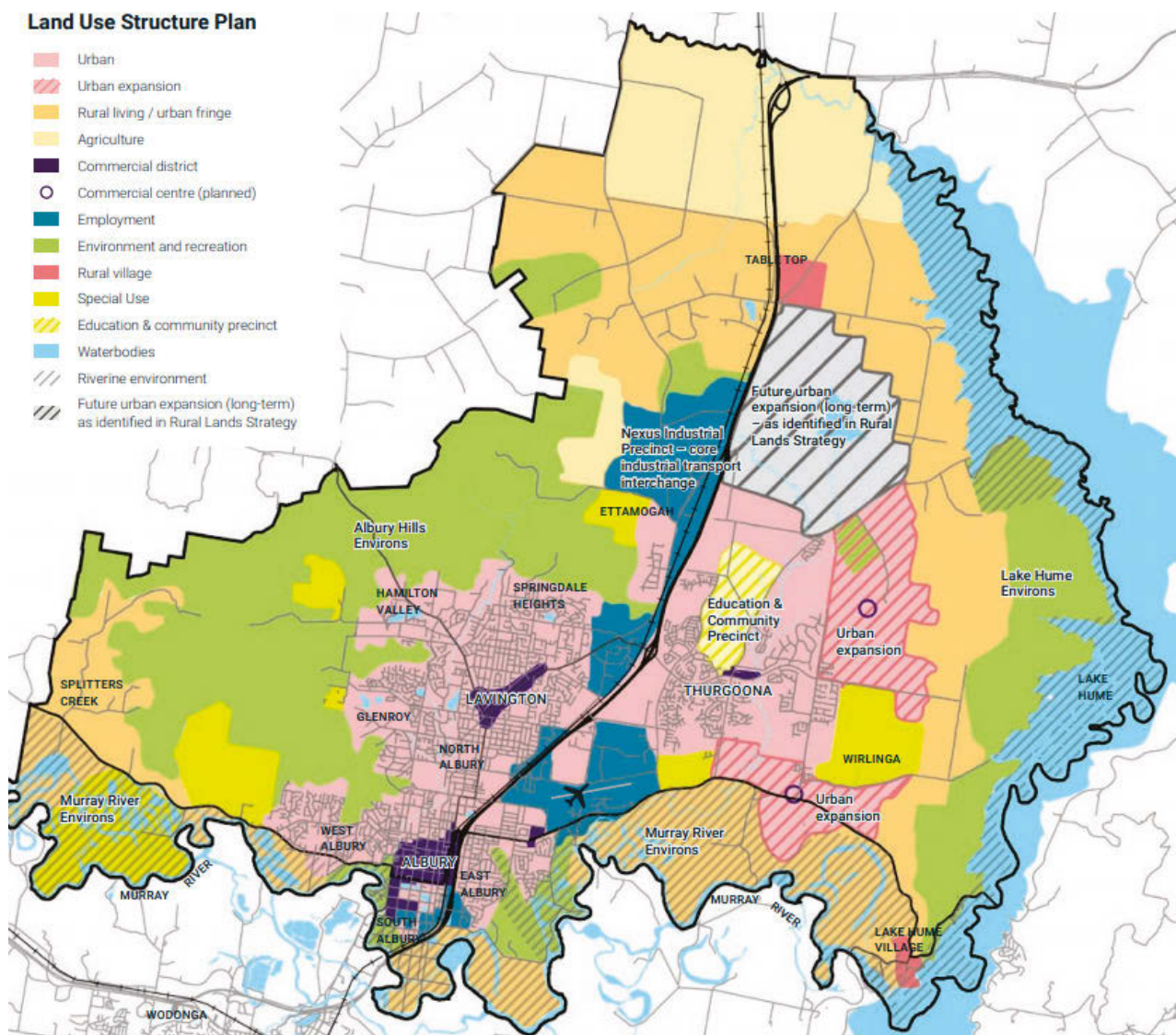


FIGURE 12-11 ALBURY LAND USE STRUCTURE PLAN

Source: Albury City Council, 2020

### Greater Hume–Lockhart precinct

The *Greater Hume Local Strategic Planning Statement* (Greater Hume Council, 2020) and the *Local Strategic Planning Statement 2020–2040* (Lockhart Shire Council, 2020) sets out the vision for the future planned land uses within those LGAs. Both statements focus on promoting local employment opportunities. In the Greater Hume LGA, this includes the extension of industrial land uses on the edges of Culcairn and Henty townships near to these enhancement sites. Additional areas of residential growth have been identified on the edges of Culcairn and Henty townships.

### Wagga Wagga precinct

The proposed *Wagga Wagga Health and Knowledge Precinct* (Wagga Wagga City Council, 2019) is planned to enhance current and new health services in Wagga Wagga and the Riverina, and to support local employment in this key industry. The masterplan applies to the north of the rail corridor and includes the area directly north of the Cassidy Parade pedestrian bridge enhancement site, as shown in Figure 12-12.



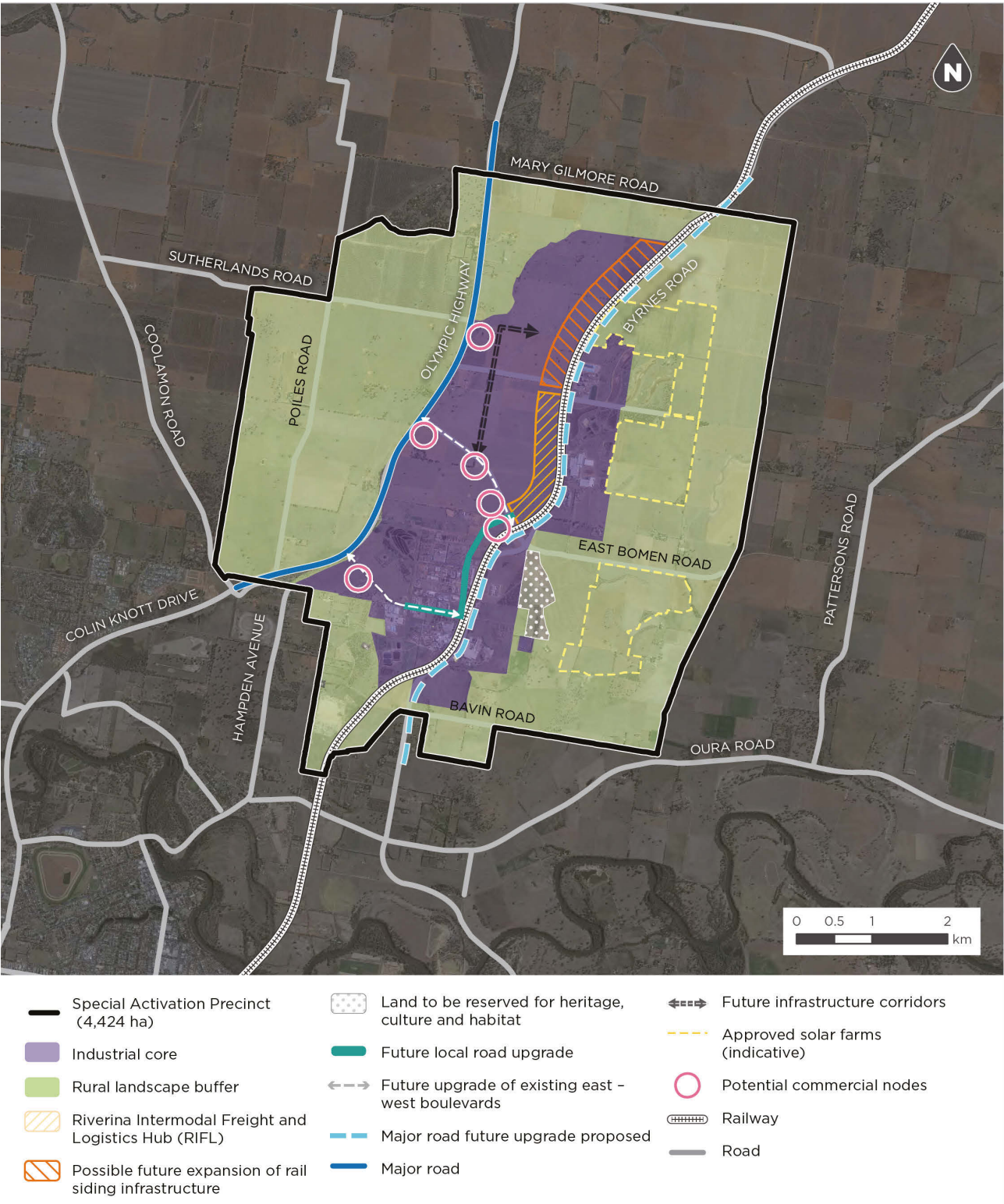


**FIGURE 12-12 INDICATIVE MASTERPLAN FOR AREA NORTH OF THE CASSIDY PARADE PEDESTRIAN BRIDGE ENHANCEMENT SITE**

Source: Wagga Wagga City Council, 2019



The Wagga Wagga Special Activation Precinct (SAP) Master Plan (NSW Government, 2021b) provides for a consolidated industrial precinct in the area between the Olympic Highway and Byrnes Road, as shown in Figure 12-13. The precinct includes Riverina Intermodal Freight and Logistics Hub, Regional Enterprise Zone, Rural Activity and Bomen Axe Quarry. The Bomen Yard clearances enhancement site falls within the Wagga Wagga SAP.



**FIGURE 12-13 PROPOSED STRUCTURE PLAN FROM THE WAGGA WAGGA MASTER PLAN**

Source: NSW Government, 2021b

## Junee precinct

The *Junee Local Strategic Planning Statement* (Junee Shire Council, 2020) outlines the land use framework for Junee's growth to 2040. Inland Rail is identified as a key project in the LGA. The statement identifies areas for residential and industrial growth around the edge of Junee near the Olympic High underbridge enhancement site, as shown in Figure 12-14.

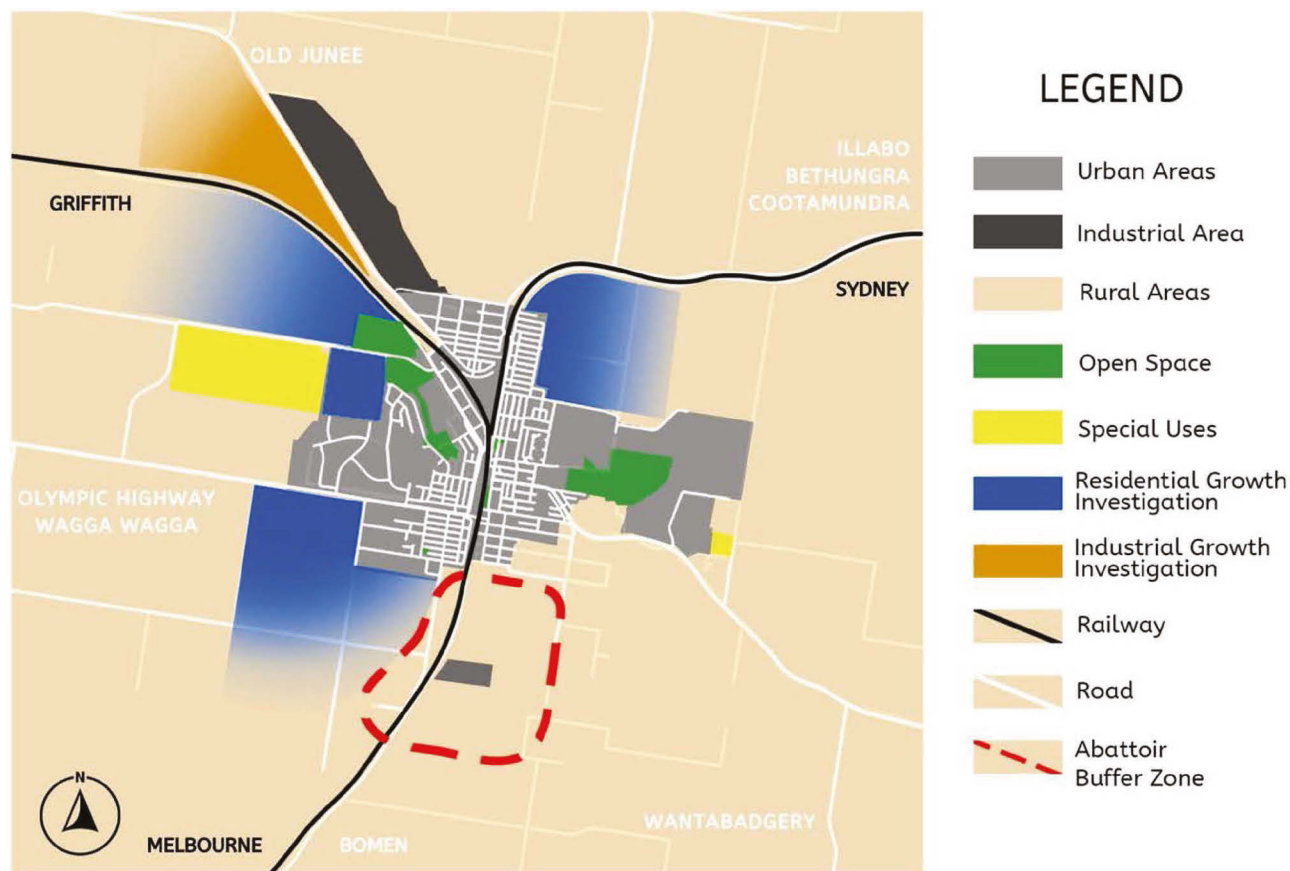


FIGURE 12-14 JUNEE 2040 GROWTH STRATEGY

Source: Junee Shire Council, 2020

### 12.3.5 Crown land and travelling stock reserves

Crown land holdings include land managed for forestry and conservation as well as Crown roads and Crown reserves, managed under the *Crown Land Management Act 2016* (NSW). Crown reserves are lands retained in public ownership for specified purposes. In the study area, common purposes are for roads, waterways and the retention of native vegetation.

The proposal site is partially on Crown land at several sites, including Crown roads and crossings over two Crown waterways: Murray River and Sandy Creek at Uranquinty. A Crown road parcel is located adjacent to the rail corridor for a significant length of the Junee to Illabo clearances enhancement site.

Travelling stock reserves (TSRs) are parcels of Crown land originally reserved for the use of travelling stock to connect smaller watering and camping reserves. In the study area, TSRs follow highways in most instances (refer to section 9.2.1). A TSR, when on public roads, is referred to as a livestock highway. The proposal site does not intersect any parcels of land that are TSRs, but is adjacent to a TSR at Uranquinty Yard clearances enhancement site. Livestock highways are also located in the Greater Hume—Lockhart and Wagga Wagga precincts in the vicinity of enhancement sites (refer to section 9.3.1).

### 12.3.6 National parks and state forests

The Riverina Murray region contains a number of state and national forests; however, none are located adjacent to or within the proposal site. The nearest state or national park to the proposal site is Doodle Comer Swamp Nature Reserve, located approximately one kilometre south west of Henty Yard clearances enhancement site.

### **12.3.7 Mining, exploration and petroleum leases and licences**

All the LGAs within the study area have some exploration activity occurring, generally relating to metallic minerals. The Junee to Illabo clearances enhancement site intersects with two metallic mineral exploration licences (EL8867 and EL8470).

Only two mines are active in the study area within the Albury and Lockhart LGAs (Department of Regional NSW, 2021). The proposal site does not intersect any mining titles or petroleum leases or licenses. The nearest mining title to the proposal site is for the Boral Bricks Quarry, 3.5 kilometres south west of the Billy Hughes bridge enhancement site.

### **12.3.8 Native title**

A search of the National Native Title Tribunal on 9 June 2021 returned no registered native title claims or Indigenous Land Use Agreements within the study area.

## **12.4 Impact assessment—construction**

### **12.4.1 General construction land use impacts**

Impacts to land use during construction would be associated with the change in land use to construction work areas and other construction facilities (such as compounds and stockpile areas).

The current land use of most of the proposal site is transport infrastructure, with enhancement sites positioned along the Main South Line. Due to the importance of the Main South Line, the proposal would be staged to avoid any potential impacts on the operation of the line, with any works impacting on the use of the corridor to be undertaken during designated possession periods or under track occupancy authorisations, as discussed further in Chapter 9: Transport and traffic.

During construction, the proposal would also temporarily occupy land used for agriculture, community and education facilities, infrastructure, and public recreation for construction compounds and access. These impacts are discussed further in the following sections.

Impacts to adjacent and surroundings land uses would be due to changes to access and amenity impacts associated with noise, air quality and visual impacts. These impacts are considered further in Chapter 14: Economic, Chapter 15: Noise and vibration, Chapter 17: Landscape and visual amenity and Chapter 22: Air quality.

Pedestrian, cyclist and vehicular access over the rail corridor would be temporarily impacted at several sites, as described in Chapter 9: Transport and traffic. Changes to property access would be managed to ensure access is suitably maintained as far as reasonably practicable.

### **12.4.2 Land requirements**

Construction of the proposal would require the temporary use of land outside the rail corridor. The land requirements (as identified in section 12.3.2) are based on preliminary estimates, which would be refined and confirmed as the design and construction planning progress. It is the intention of ARTC to enter into agreements with the landholder, council or public authority to temporarily lease these areas.

The majority of land uses impacted by temporary land requirements outside the rail corridor are associated with road and transport infrastructure or environmental management land uses. ARTC would enter into agreements with the relevant council or Transport for NSW for the temporary occupation of these areas during construction.

Other land uses that would be temporarily impacted are public recreation, industrial, and commercial and commercial accommodation (including the rear of a service station and vacant properties), education and community services, telecommunications infrastructure, residential (currently vacant) and agricultural. These land uses would be impacted by a temporary change of use in order to provide areas for construction. The area temporarily required for the proposal at each property is only a small portion of the total property and would not impact ongoing use, viability or productivity of the broader property during construction except at the Billy Hughes bridge enhancement site, where the total area of a private property would be required. This property is currently used for agricultural purposes and is discussed further in section 12.4.3.

At the Kemp Street bridge enhancement site, the proposal would partially occupy a private property for the purposes of a construction compound. A development application for the construction of accommodation (cabins) was approved for this property in May 2021 and it is expected that the development would be operational when construction commences. Through engagement with the landholder, the area required for the proposal was reduced to avoid direct impact on the accommodation buildings. The compound would be located in an area identified for a future stage of development that the landholder has advised would occur after construction of the proposal concludes.

In some instances, the partial occupation of areas by construction compounds or construction would be located in operational industrial or commercial operations—specifically the existing Wagga Wagga City Council depot



(Pearson Street bridge enhancement site); Wagga Wagga Showground campground (Pearson Street bridge enhancement site); Telstra facility (Cassidy Parade pedestrian bridge); service station (Olympic Highway underbridge enhancement site); intermodal terminals (Harefield Yard clearances); and grain terminals (Junee to Illabo clearances enhancement site). ARTC would enter into agreements with the landholders so that construction activities are suitably managed as to not disrupt the broader use of these properties. Refer to Chapter 14: Economic and Technical Paper 5: Economic of this EIS for further discussion on potential economic impacts on commercial operations.

All areas would be reinstated at the completion of construction at these enhancement sites and would not impact the continuation of existing land uses. Construction of the proposal is not predicted to result in any impacts on future planned land uses identified in section 12.3.4.

### 12.4.3 Agricultural land use and activities

#### Agricultural land use impact

At Billy Hughes bridge enhancement site, the construction compound to the west of the rail corridor would temporarily disrupt current grazing activities. This land is currently leased for sheep grazing and the 5.48 ha forms part of a broader lease totalling around 200 ha. ARTC would enter into a lease or other agreements for the use of this site and would restore the site to a condition as determined in that agreement. At the Junee to Illabo clearances enhancement site, the small areas of land that would be impacted by the proposal are comprised of access tracks and vegetation or used for agriculture along the existing rail corridor fence line. These land parcels are owned by the Crown or Junee Shire Council. Overall, the proposal site would temporarily occupy a very small amount (0.0004 per cent) of the total agricultural land within the study area. The temporary land requirements identified for the proposal are based on preliminary estimates, which would be refined and confirmed as the design and construction planning progress. The temporary land requirements include a nominated setback from the proposed infrastructure to provide sufficient working areas or to gain access to the rail corridor or to adjust utilities. At some instances within the Junee to Illabo clearances enhancement site, the proposal site has an interface with the boundaries of some Crown roads and agricultural properties. The proposal site would be refined during detailed design to limit the impact area to be within the rail corridor, as far as practicable. Should temporary works remain in these properties, these activities would be coordinated with the relevant landholder and/or other parties that have a legal use of these areas. ARTC would consult with any other party that has informal use of the impacted areas.

At LX 605 within the Junee to Illabo clearances enhancement site, there are two internal access roads that join on the southern side of the rail corridor and provide direct access to the Olympic Highway for council quarry operations and a privately owned agricultural property. An approximately 130 m section of the eastern access road on approach to the level crossing would be moved south by about 6 m to accommodate a drainage channel (refer to section 7.3.2 of Chapter 7: Proposal features and operation for more information). The land affected is Crown land and provides access to the privately owned agricultural property. While these works on the eastern access road are underway, the western access road would remain useable and has additional connection points to the eastern access road south of the road adjustments. Additionally, the privately owned agricultural property can be accessed from other public roads. As access would be maintained and of short duration while work is carried out on the eastern access road, potential impacts to agricultural operations would be negligible. Adjustments to infrastructure (such as the internal access road and fencing) would be coordinated with the relevant landholder and/or other parties that have a legal use of these areas. Short-term closures of the three level crossings would occur during one track possession period. Detours would be in place during this time, with alternative access available in most instances for general traffic and/or impacted landholders. This may disrupt agricultural activities for properties in the area.

Land used for agricultural purposes is also directly adjacent to several enhancement sites. Potential indirect impacts on agricultural production could occur as a result of construction activities on adjoining land, including:

- ▶ dust, affecting crops and pastures
- ▶ noise and light, affecting grazing patterns of livestock
- ▶ interrupted land management practices, such as weed spraying and harvesting
- ▶ competition for local labour supply
- ▶ inadvertent damage to fencing that could result in unintended livestock risks.

Any indirect impacts would be limited to when works are occurring near agricultural land, and mitigation measures would be implemented to minimise any disruption to agricultural activities due to dust generation, light spill and noise impacts. Any disruption would be in the areas adjacent to the proposal site and would be unlikely to impact the overall productivity of the larger agricultural property. Further discussion on the potential indirect impacts are included in Chapter 22: Air quality, Chapter 15: Noise and vibration, Chapter 17: Landscape and visual amenity. Matters relating to local labour supply are discussed in Chapter 13: Social and Chapter 14: Economic.

## Biosecurity

Construction of the proposal would result in an increased movement of vehicles and people to and within the proposal site, which has the potential to increase the spread of weeds and diseases within the proposal site and adjoining areas. Weed seeds could be transported to, from and within the site on clothing and via vehicle wheels and undercarriages. Refer to section 16.2.2 of Chapter 16: Biodiversity for priority, high-threat and WoNS weeds identified within the study area.

If a new weed, pest or disease is introduced to a property, it can impact agricultural production through reduced productivity from damage to crops or health of livestock; increased costs related to monitoring, pesticides or changes to practices; or loss of access to markets. The potential implications for adjoining landowners include:

- ▶ dependency on the construction contractor to undertake weed control (spraying and grazing) within the worksite
- ▶ the need for additional weed, pest and disease inspections and controls required on adjoining land
- ▶ impacts on productivity from introduced weeds, pests and diseases
- ▶ impacts on human health and biodiversity.

The General Biosecurity Duty under the *Biosecurity Act 2015* (NSW) requires a person who deals with biosecurity risks to be aware of the risks and ensure (as far as reasonably practicable) that the risk is prevented, eliminated or minimised. In practical terms, this requires people to be aware of their surroundings and take action to prevent the introduction and spread of pests, diseases, weeds and contaminants. The Biosecurity Regulation 2017 sets out a range of additional mandatory measures for biodiversity risk management. Biosecurity risks for the proposal would be managed through the CEMP (refer to section 12.6.4).

### 12.4.4 Public recreation

Small areas of public parks would be occupied during construction at:

- ▶ Kildare Street Park at the Cassidy Parade pedestrian bridge enhancement site (for around 6 months)
- ▶ Endeavour Park at Kemp Street Bridge enhancement site (for around 10 months)
- ▶ a grassed open space area at the Olympic Highway underbridge enhancement site (for around three months).

Impact to these public parks would be for the duration of construction works at these enhancement sites and areas would be reinstated at the completion of construction.

The Kildare Street Park (at Cassidy Parade pedestrian bridge), which contains a play area (swing set), would be reinstated at the completion of construction, including the play equipment.

The eastern extent of Endeavour Park is a grassed area with scattered mature trees under passive recreational use, with shared paths, an amenities block and an off-street parking area. Approximately 1.15 ha of the eastern portion of the park would be temporarily impacted for road diversions and construction. Likewise, the amenity of the residual southern portion of the park would be impacted during construction (due to direct impacts, removal of street trees and general construction activity). This would disrupt people that may use these spaces; however, the majority of Endeavour Park would remain available for the local community. The social, health and wellbeing impacts of this disruption is discussed further in section 13.3 of Chapter 13: Social. The permanent impacts to open space at this enhancement site is discussed further in section 12.5.1 of this EIS.

At Junee, a grassed open space area under passive recreational use, adjacent to Illabo Road would also be impacted during construction. This would be reinstated at the completion of construction. During construction, waterway access beneath the Murray River bridge would be partially restricted for construction and safety purposes. Any restrictions to navigation of the river would be undertaken in accordance with the *Marine Safety Act 1998* (NSW). This may have impacts on watercraft using the river for activities such as kayaking, canoeing, fishing and tourism in the vicinity of the Murray River bridge enhancement site. The river would be partially restricted for the full duration of the works at the enhancement site (around 1 year).

### 12.4.5 Services and utilities impacts

The design has, and would continue to, take into account the location and potential impacts on services and utilities within and adjacent to the proposal site. Where required, these would be relocated and/or protected. Short-term disruptions may occur during this work and any disruptions would be managed by the utility owner in consultation with ARTC. All relocations would be designed and undertaken in consultation with the relevant asset owner. For further discussion on utilities refer to section 8.7 of Chapter 8: Construction of the proposal.

### 12.4.6 Exploration licences

The proposal site intersects two active exploration licences. At these locations, the proposal is located within the existing rail corridor and would occupy only a small portion of the total exploration areas. The proposal would not



change any access to the underlying geology for exploration purposes. The rail corridor would remain a constraint for future exploration activities to consider.

## 12.5 Impact assessment—operation

This section describes the potential impacts of the proposal during the operation phase. Operation impacts are usually permanent. Potential permanent impacts relating to the viability and management of affected properties are addressed in this section.

### 12.5.1 General operational land use impacts

Operation would not require changes to the ARTC lease area or require the permanent acquisition of private property for the operation of the railway. Direct operational impacts on land use outside the rail corridor would include:

- ▶ council land due to the construction of ramps within the linear park as part of the new Albury Station pedestrian bridge enhancement site
- ▶ council and state roads at the Billy Hughes bridge enhancement site
- ▶ council road and Crown roads for the replacement of the Edmondson Street bridge as well as establishing a permanent easement at Kildare College (Lot 2 DP543801) for the modification to transmission line infrastructure
- ▶ council land for the replacement of the Cassidy Parade pedestrian bridge including Lot 12 DP1136467
- ▶ council roads and state rail authority land for the replacement of Kemp Street bridge (Lots 1 and 2 DP914183 and Lot 4, section 1, DP946), which would continue to be used for transport infrastructure
- ▶ Crown land located alongside Junee to Illabo clearances enhancement site to accommodate minor adjustments to rail infrastructure (such as drainage and signalling infrastructure), utilities and internal roads.

As part of the replacement of the Albury Station pedestrian bridge enhancement site, two ramps would be established on the western end of the existing section of bridge connecting to Kenilworth Street. At the completion of construction, there would be new pedestrian ramps that would reduce Lot 2 and 3 DP1172095 by about 1,400 square metres. The final urban design and landscaping of this space would be subject to further engagement with Albury City Council during detailed design.

At Kemp Street bridge there would be permanent reconfiguration to the open space. At the completion of construction, there would be no net loss of open space, with additional open space created between the Olympic Highway and the rail corridor; however, the eastern portion of Endeavour Park would be reduced by about 50 m<sup>2</sup>. The final landscaping and urban design of this space would be subject to further engagement with Junee Shire Council (refer to Chapter 17: Landscape and visual).

At the Junee to Illabo clearances enhancement site, the proposal would only require a small area of the total Crown land parcel. It would not impact the continued use of the larger parcel of land. Land used for temporary construction use would be rehabilitated and returned to its existing use, so that impacts to the ongoing viability of these land uses would not occur.

The proposal would not alter the maintenance regime for the rail line. As such, there would not be an increase to the occasional maintenance vehicles that may access the rail corridor from time to time. Consequently, the biosecurity risk associated with rail operations would not increase as a result of the proposal and would continue to be managed in accordance with ARTC's standard maintenance procedures.

ARTC would continue to manage the land in accordance with the General Biosecurity Duty under the *Biosecurity Act 2015* (NSW), the *Riverina Regional Strategic Weed Management Plan* (Riverina Local Land Services, 2017) and the *Riverina Regional Strategic Pest Animal Management Plan* (Riverina Local Land Services, 2018).

Inland Rail is identified in the *Riverina Murray Regional Plan 2036* as providing an essential role in freight and logistic hubs within the Riverina Murray region, and identified in local council strategies as playing an important role in supporting growth in this region. The operation of the proposal would not result in any significant impacts on the future land use opportunities in the study area as no permanent private land acquisition is proposed. Likewise, local and state government do not propose any future changes to the existing rail corridor. The planned land uses consider the existing use of the rail corridor and the Inland Rail program.

There is the potential for amenity changes at properties along the rail corridor resulting from the change in train operations on the existing rail corridor. The significance of impacts would depend on the location. Potential operational noise and visual impacts are considered in Chapters 15: Noise and vibration and Chapter 17: Landscape and visual. Decisions would be made by individual landowners about existing and future developments based on their own assessment of the potential impacts of the proposal.

## 12.6 Mitigation and management

### 12.6.1 Approach to mitigation and management

The key approaches to managing the potential impacts identified would involve:

- ▶ minimising the construction and operation footprints as far as practicable
- ▶ managing the leasing process with landholders
- ▶ minimising the potential for direct impacts on properties
- ▶ minimising changes to access during construction for pedestrian, cyclist, motorists and waterway users.

The design would continue to be refined to minimise the proposal's land requirements and associated property impacts as far as reasonably practicable. Consultation with landholders would be ongoing to identify opportunities to minimise impacts on property and farming operations, where practicable. During the leasing process, ARTC would seek to secure agreement with affected landholders through consultation under the communication management plan, to guide property-level design requirements and the management of construction on, or immediately adjacent to, private properties. Consultation would ensure that owners/occupants are informed about the timing and scope of activities in their area. It would also assist in identifying feasible and reasonable property-specific measures where construction is located on, or immediately adjacent to, private properties and has the potential to affect day-to-day activities conducted on these properties.

Utility adjustments required would be confirmed during detailed design in consultation with utility owners. Adjustments would be contained within the proposal site (including within existing or new road corridors), where practicable; however, there is the possibility that adjustments could extend beyond the proposal site. Appendix D: Utilities management framework outlines the process that would be followed in such instances.

### 12.6.2 Mitigation measures

Measures that will be implemented to address potential impacts on land use and property are listed in Table 12-3.

**TABLE 12-3 LAND USE AND PROPERTY MITIGATION MEASURES**

Stage	Ref	Impact/issue	Mitigation measure
Detailed design/ pre-construction	LP1	Land use and property impacts, including impacts on operations	Final property requirements for the proposal will be confirmed during design and construction planning. The final temporary or permanent footprint will be refined to minimise potential impacts on land uses and properties as far as reasonably practicable. For the Junee to Illabo clearances enhancement site, the proposal site would be refined to contain the construction footprint and/or design within the rail corridor as far as reasonably practicable where there are interfaces with the boundaries of agricultural properties and Crown roads. Consultation with landholders will be ongoing to identify opportunities to minimise impacts on their operations, where practicable.
Detailed design/ pre-construction	LP2	Property impacts	Wherever possible, the occupation of private land will be by negotiated agreement, consistent with the objectives of the <i>Land Acquisition (Just Terms Compensation) Act 1991</i> (NSW). Where agreement cannot be reached, the compulsory land acquisition process will be followed. Any compulsory acquisition process will not commence until after making a genuine attempt to reach an agreement with each private landowner for a minimum of six months (post issue of the opening letter).
Pre-construction / construction	LP3	Property impacts	ARTC or the appointed construction contractor will enter into a lease or other secure agreement with landholders where temporary use of private property is required. This will guide the management of construction on private properties. This may include agreements on measures to minimise property impacts or adjoining operations, required adjustments to structures or restoration requirements.
Pre-construction / construction	LP4	Property impacts	Property landholders and occupants will be consulted in accordance with the communication management plan to ensure these parties are informed about: <ul style="list-style-type: none"> <li>▶ timing and scope of activities in the area</li> <li>▶ potential property impacts/changes, particularly in relation to impacts on access, fencing or services</li> <li>▶ activities that have the potential to impact the use of the property.</li> </ul>

Stage	Ref	Impact/issue	Mitigation measure
Pre-construction / construction	LP5	Access impacts	Where temporary changes to access arrangements or where adjustments to internal access roads are required for individual properties, ARTC will advise relevant property owners/occupants and consult with them in advance regarding alternative access arrangements.
Detailed design/ pre-construction	LP6	Impacts on services and utilities	The location of all utilities, services and other infrastructure, and requirements for access to, diversion, protection and/or support, will be confirmed prior to construction. This will include (as required), undertaking utilities investigations, including intrusive investigations, and consultation and agreement with service providers.
Construction	LP7	Land disturbance	Areas temporarily leased for construction will be restored to a condition as set out in leases or other arrangements with the landholder. Rehabilitation of disturbed areas will be undertaken progressively.

### Effectiveness of mitigation measures

The mitigation measures specified in Table 12-3 are anticipated to reduce the likelihood and/or consequence of the identified risks. Developing property-specific measures to managing impacts at affected properties, in consultation with individual landholders, is expected to be the most effective measure to minimise the potential impacts of the proposal as far as reasonably practicable.

### 12.6.3 Interactions between mitigation measures

Mitigation measures in other chapters that are relevant to the management of property and land use impacts include:

- ▶ Chapter 9: Transport and traffic, specifically measures to manage impacts to Murray River users, property access, TSRs and other agricultural activities, and broader road network changes (including temporary changes)
- ▶ Chapter 15: Noise and vibration, specifically measures to manage construction and operational noise impacts
- ▶ Chapter 16: Biodiversity, with respect to the management of weeds and other pests
- ▶ Chapter 17: Landscape and visual, specifically measures to address changes to open space
- ▶ Chapter 22: Air quality, specifically management of dust emissions during construction
- ▶ Chapter 24: Hazards with respect the utilities relocation and adjustments.

There are no mitigation measures identified in the assessment of other environmental aspects that are likely to affect the assessment of transport and traffic

### 12.6.4 Residual risk

Residual impacts are impacts of the proposal that may remain after implementation of the management and mitigation measures detailed in sections 12.6.1 and 12.6.2. These are summarised in Table 12-4.

Further information on the approach to the environmental risk assessment, including descriptions of criteria and risk ratings, is provided in Appendix E: Environmental risk assessment.

**TABLE 12-4 RESIDUAL RISK MANAGEMENT**

Stage	Potential impact	Pre-mitigated rating	Mitigation measures <sup>1</sup>	Residual risk rating	Residual risk management <sup>2</sup>
Construction	Effects on access to properties as a result of changes to private access roads and internal access arrangements.	High	LP2, LP3, LP4, TT14, TT16, TT17	Medium	Potential impacts would be managed through appropriate measures identified in consultation with individual landholders.
Construction	Indirect impacts on agricultural land use/production and livestock from construction activities, including impacts from changes to access, noise and air pollution.	Medium	LP3, LP4, TT16, TT17	Low	
Construction	Temporary changes to land use as a result of the proposal's land requirements during construction	Medium	LP3, LP4	Medium	Potential impacts would be managed through appropriate measures identified



Stage	Potential impact	Pre-mitigated rating	Mitigation measures <sup>1</sup>	Residual risk rating	Residual risk management <sup>2</sup>
					in consultation with individual landholders.
Construction	Introduction of biosecurity risks due to the movement and storage of construction machinery and materials, including the spread of weeds and pathogens.	Medium	CEMP	Low	
Construction	Effects on exploration licences, such that viability is affected.	Low	N/A	Low	
Construction	Impacts on other infrastructure during construction including utilities	Very high	LP5, H1, TT1, utilities management framework	Medium	ARTC would continue to liaise with asset owners to minimise impacts on other infrastructure, including utilities
Construction	Effects to access to travelling stock reserves and other stock movements	Low	TT4	Low	
Operation	Land permanently acquired for the proposal results in a change to land use in the study area, negatively affecting the availability of land for non-transport related uses	Low	LP2	Low	N/A

1. As described in Table 12-3.

2. For residual impacts with a risk rating of medium or above.