

# TECHNICAL REPORT

# 13

INLAND  
RAIL 

## Social assessment

NARROMINE TO NARRABRI ENVIRONMENTAL IMPACT STATEMENT

ARTC

The Australian Government is delivering  
Inland Rail through the Australian  
Rail Track Corporation (ARTC), in  
partnership with the private sector.



# **ARTC Inland Rail Narromine to Narrabri Project**

Social Assessment  
Technical Report 13

2-0001-250-EAP-00-RP-0009

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# Executive summary

## The proposal

The Australian Government has committed to delivering a significant piece of national transport infrastructure by constructing a high performance and direct interstate freight rail corridor between Melbourne and Brisbane, via central-west New South Wales (NSW) and Toowoomba in Queensland. Inland Rail is a major national program that will enhance Australia's existing national rail network and serve the interstate freight market.

Australian Rail Track Corporation Ltd (ARTC) ('the proponent') is seeking approval to construct and operate the Narramine to Narrabri section of Inland Rail ('the proposal'). The proposal consists of about 306 kilometres of new single-track standard gauge railway with crossing loops. The proposal also includes changes to some roads to facilitate construction and operation of the new section of railway, and ancillary infrastructure to support the proposal.

The proposal would link the Parkes to Narramine section of Inland Rail located in central western NSW, with the Narrabri to North Star section of Inland Rail located in north-west NSW.

The proposal is State significant infrastructure and is subject to approval by the NSW Minister for Planning and Public Spaces under the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act). The proposal is also determined to be a controlled action under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), and requires approval from the Australian Minister for the Environment.

## This report

This Social Assessment has been prepared on behalf of ARTC for the proposal to support the environmental impact statement (EIS) for the proposal and address the Secretary's Environmental Assessment Requirements (SEARs) for social impacts.

The assessment presented in this report has included a review of relevant legislation, consideration of the existing conditions, an impact assessment to determine the significance of social impacts as a result of the construction and operation of the proposal, and a cumulative impact assessment. Recommended mitigation and management measures are identified in response to the impact assessment findings.

## Existing social context

The proposal passes through five local government areas (LGAs). The main population centres include Narrabri to the north and Dubbo to the south, with both centres providing regional and district level services and facilities for surrounding towns. The local study area also includes towns and communities located in close proximity to the proposal site, including Narramine, Gilgandra, Curban, Baradine and Narrabri.

Land surrounding the southern and central portions of the proposal site is mainly used for agricultural and grazing purposes, while land use in the northern portion of the proposal site is dominated by reserves, including state forests, conservation areas and national parks used for forestry and conservation purposes.

Overall, the regional study area faces challenges such as ageing of the population, population decline, outmigration of young people, and skill and labour shortages, which present a barrier to diversifying local economies. The regional study area also has high numbers of Indigenous residents. There are high rates of social capital and cohesion amongst communities. Top industries in the region in terms of economic output and employment include agriculture, construction, mining, manufacturing, and real estate. Tourism is also an important and growing

industry for the Dubbo, Narrabri and Warrumbungle LGAs. Unemployment levels vary across the region and experience high rates of fluctuation throughout the year. This is due to several factors such as the seasonal nature of the agricultural industry, which combined with the prolonged drought conditions has affected many local businesses and economies. Communities in the area value the rural amenity and lifestyle, access to services, and the environmental features.

### **Impacts from the proposal during construction**

The key social benefits with the potential to occur during construction are summarised below:

- Expansion of the regional Construction sector, Professional, Scientific and Technical Services sector, and Wholesale Trade sector due to direct and indirect employment opportunities.
- Increased demand for goods and services would provide procurement opportunities for local and Indigenous businesses to subcontract to the primary construction contractor.
- Some businesses in regional towns hosting temporary workforce accommodation facilities may benefit from the non-resident construction workforce spending their wages.
- Construction employment opportunities for skilled workforce, and opportunities for upskilling to meet construction training requirements.

The key social impacts with the potential to occur during construction are summarised below:

- Disruption to lifestyles and livelihoods for landholders resulting from land requirements for the proposal, which may disrupt internal property access due to severed or fragmented land, and/or temporary lease of land. This may reduce efficiency and viability of farming operations, increase costs, and require changes to farming practices.
- Uncertainty and stress for some landholders affected by land requirements for the proposal, leading to the potential for individual and community wellbeing impacts for some.
- Reduced amenity for residents and community members in close proximity to construction activities which may affect people's daily activities and impact community values related to rural amenity.
- Some amenity impacts for residences and community facilities in close proximity to temporary workforce accommodation facilities, and impacts associated with a non-resident construction workforce such as demand on local services and potential wellbeing concerns.
- Minor delays and disruptions due to construction traffic and temporary changes to road conditions which may increase travel times.
- Impacts on Narrabri Dirt Bike Club which would be subject to partial land requirements.
- Potential impacts on emergency services due to changes to access and road conditions.

### **Impacts from the proposal during operation**

The key social benefits with the potential to occur during operation of the proposal are summarised below:

- Improvements in freight productivity, reliability and availability, and benefits to the community from crash reductions, reduced environmental externalities and road decongestion benefits. Agricultural industries in the region will particularly benefit from improvements in supply chain efficiency.
- There may be some opportunities for local businesses to supply ARTC in relation to rail operations and maintenance.

- There may be up to 10 employment opportunities for skilled workforce in the region during operation, or these roles could attract skilled workers to the region.
- Overall improved travel times and road safety by reducing the volume of intercity freight trucks on the Newell Highway.

The key social impacts with the potential to occur during operation of the proposal are summarised below:

- Properties along the proposal area may be impacted in varying ways due to new rail infrastructure, such as disrupted internal property access, farming operations and operating costs, or change current farming practices for these properties.
- Changes to access arrangements within private properties due to closure of private roads which may increase travel times and routes for property owners, and increase safety risks.
- Amenity changes resulting from operation of trains due to noise, vibration and visual changes, which could affect the way of life for nearby residents and community members.
- Closures of private and public roads may result in changes to the way community members access properties, towns and community facilities and services.
- Potential increased health and safety risks at new level crossings due to possible collisions between trains and pedestrians, motorists and livestock
- Potential for increased emergency response times due to delays at level crossings and increased demand due to safety risks associated with new level crossings.

### **Recommended mitigation measures**

Various mitigation and management measures have been identified to address social impacts and enhance social benefits identified in this report. Overall, the key mitigation measures recommended to address social impacts and opportunities relate to the following key themes, which underpin ARTC's approach to social performance and social impact management:

- local business and industry content
- workforce management
- housing and accommodation
- community health and wellbeing
- community and stakeholder engagement.

ARTC would prepare a Social Impact Management Plan (SIMP) which would provide a detailed plan for how the impacts and opportunities identified in this report would be managed and mitigated from approval of the proposal through detailed design and construction. This would include roles and responsibilities for the stakeholders involved in managing social impacts and enhancing opportunities. The SIMP would specify detailed management measures supported by appropriate monitoring and reporting requirements.

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# Glossary and definitions

Acronym/term	Definition
ABS	Australian Bureau of Statistics
ARTC	Australian Rail Track Corporation
ASGS	Australian Statistical Geography Standard
Borrow pit	A defined area from which construction material (eg fill materials), is taken for use as fill at another location.
CCC	Community Consultative Committee
Construction compound	An area used as the base for construction activities, usually for the storage of plant, equipment and materials and/or construction site offices and worker facilities.
Country	Country describes everything within the landscape, which is intrinsically linked to identity and culture. When Aboriginal communities refer to their Country, it usually expresses a custodial relationship (ie the land where their community originated from).
Crossing loop	A section of track off to the side of the main track/s that allows a train to move to the side so that another can pass. Crossing loops also have a maintenance siding.
Culvert	A structure that allows water to flow under a road, railway, track or similar obstruction.
EIS	Environmental impact statement
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
ERP	Estimated Resident Population
DIDO	Drive In/Drive Out – Workers who drive to their place of employment and drive home again after their roster.
FIFO	Fly In/Fly Out – Workers who fly to their place of employment and fly home again after their roster.
Freight	Goods transported by truck, train, ship, or aircraft.
GRP	Gross Regional Product
Intermodal terminal	A facility used to facilitate the movement of freight between different modes of transport (such as between trucks and rail), usually without handling of the freight itself when changing modes.
IRSAD	Index of Relative Socio-Economic Advantage and Disadvantage
LALC	Local Aboriginal Land Council
Level crossing	A place where rail lines and a road cross at the same elevation. Level crossings have either passive or active controls to guide road users: <ul style="list-style-type: none"> <li>• Passive – have static warning signs (eg stop and give way signs) that are visible on approach. This signage is unchanging with no mechanical aspects or light devices.</li> <li>• Active – flashing lights with or without boom barriers for motorists, and automated gates for pedestrians. These devices are activated prior to and during the passage of a train through the level crossing.</li> </ul>

Acronym/term	Definition
Local road	A road used mainly to access properties located along the road.
LGA	Local Government Area
NSW	New South Wales
Possession	A period of time during which a rail line is blocked to trains to permit work to be carried out on or near the line.
Proposal	The construction and operation of the Narromine to Narrabri section of Inland Rail.
Proposal site	The area that would be directly affected by construction (also known as the construction footprint). The proposal site includes the location of proposal infrastructure, the area that would be directly disturbed by the movement of construction plant and machinery, and the location of the storage areas/compounds sites etc, that would be used to construct that infrastructure.
Rail corridor	The corridor within which the rail tracks and associated infrastructure would be located.
RDA	Regional Development Australia
SA1	Statistical Area Level 1 are defined by the ABS as areas which are generally the smallest unit for the release of census data. They generally have a population of between 200 and 800 people.
SA2	Statistical Area Level 2 are defined by the ABS as areas which represent a community that interacts together socially and economically. They consider suburb and locality boundaries, and are the smallest release area for many ABS statistics.
SA3	Statistical Area Level 3 are defined by the ABS as areas which represent regional areas which are widely recognised as having a distinct identity and similar social and economic characteristics. They often closely align to large urban local government areas.
SA4	Statistical Area Level 4 are defined by the ABS as areas which represent large labour markets or aggregations of small labour markets based on geographical, social and economic similarities. They are aggregated SA3s, and are the largest sub-State regions in the Main Structure of the ASGS.
SEARs	Secretary Environmental Assessment Requirements
Sensitive receiver	Land uses and activities that are sensitive to potential noise, vibration, air and visual impacts, such as residential dwellings, schools and recreation areas.
SIA	Social impact assessment
SIA Guideline	<i>Social impact assessment guideline for State significant mining, petroleum production and extractive industry development</i> (DPE, 2017)
SIMP	Social Impact Management Plan
SEIFA	Socio-Economic Indexes for Areas includes a range of indexes developed by the Australian Bureau of Statistics to rank areas in Australia according to relative socio-economic advantage and disadvantage.
Temporary workforce accommodation	A facility used to accommodate the construction workforce for the proposal, and provide a range of facilities for the workforce, including accommodation and catering.

Acronym/term	Definition
TfNSW	Transport for NSW
Travelling stock reserves	Travelling stock reserves are parcels of Crown land reserved under the <i>Crown Land Management Act 2016</i> for use by travelling stock.
UCL	Urban Centre and Locality (UCL) are defined by the Australian Bureau of Statistics. Urban centres are areas which contain various physical infrastructure found in an urban location (eg community facilities, shopping centres, transport hubs), while localities tend to be aligned with populations residing in small settlements such as towns and villages.

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# 1 Introduction

## 1.1 Overview

### 1.1.1 Inland Rail and the proposal

The Australian Government has committed to delivering a significant piece of national transport infrastructure by constructing a high performance and direct interstate freight rail corridor between Melbourne and Brisbane, via central-west New South Wales (NSW) and Toowoomba in Queensland. Inland Rail is a major national program that will enhance Australia's existing national rail network and serve the interstate freight market.

The Inland Rail route, which is about 1,700 kilometres long, involves:

- using the existing interstate rail line through Victoria and southern NSW
- upgrading about 400 kilometres of existing track, mainly in western NSW
- providing about 600 kilometres of new track in NSW and south-east Queensland.

The Inland Rail program has been divided into 13 sections, seven of which are located in NSW. Each of these projects can be delivered and operated independently with tie-in points on the existing railway.

Australian Rail Track Corporation Ltd (ARTC) ('the proponent') is seeking approval to construct and operate the Narramine to Narrabri section of Inland Rail ('the proposal').

### 1.1.2 Approval and assessment requirements

The proposal is State significant infrastructure and is subject to approval by the NSW Minister for Planning and Public Spaces under the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act). The proposal is also determined to be a controlled action under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), and requires approval from the Australian Minister for the Environment.

This report has been prepared by the JacobsGHD Joint Venture as part of the environmental impact statement (EIS) for the proposal. The EIS has been prepared to support the application for approval of the proposal, and address the environmental assessment requirements of the Secretary of the NSW Department of Planning, Industry and Environment (the SEARs), dated 9 September 2020.

## 1.2 The proposal

The proposal consists of about 306 kilometres of new single-track standard gauge railway with crossing loops. The proposal also includes changes to some roads to facilitate construction and operation of the new section of railway, and ancillary infrastructure to support the proposal.

The proposal would be constructed to accommodate double-stacked freight trains up to 1,800 metres long and 6.5 metres high. It would include infrastructure to accommodate possible future augmentation and upgrades of the track, including a possible future requirement for 3,600 metre long trains.

The land requirements for the proposal would include a new rail corridor with a minimum width of 40 metres, with some variation to accommodate particular infrastructure and to cater for local topography. The corridor would be of sufficient width to accommodate the infrastructure currently proposed for construction, as well as possible future expansion of crossing loops for 3,600 metre long trains. Clearing of the proposal site would occur to allow for construction and to maintain the safe operation of the railway.

### **1.2.1 Location**

The proposal would be located between the towns of Narromine and Narrabri in NSW. The proposal would link the Parkes to Narromine section of Inland Rail located in central western NSW, with the Narrabri to North Star section of Inland Rail located in north-west NSW.

The location of the proposal is shown in Figure 1.1.

### **1.2.2 Key features**

The key design features of the proposal include:

#### ***Rail infrastructure***

- a new 306 kilometre long rail corridor between Narromine and Narrabri
- a single-track standard gauge railway and track formation within the new rail corridor
- seven crossing loops, at Burroway, Balladoran, Curban, Black Hollow/Quanda, Baradine, The Pilliga and Bohena Creek
- bridges over rivers and other watercourses (including the Macquarie River, Castlereagh River and the Namoi River/Narrabri Creek system), floodplains and roads
- level crossings
- new rail connections and possible future connections with existing ARTC and Country Regional Network rail lines, including a new 1.2 kilometre long rail junction between the Parkes to Narromine section of Inland Rail and the existing Narromine to Cobar Line (the Narromine West connection)

#### ***Road infrastructure***

- road realignments at various locations, including realignment of the Pilliga Forest Way for a distance of 6.7 kilometres
- limited road closures.

The key features of the proposal are shown in Figure 1.2.

Ancillary infrastructure to support the proposal would include signalling and communications, drainage, signage and fencing, and services and utilities.

Further information on the proposal is provided in the EIS.



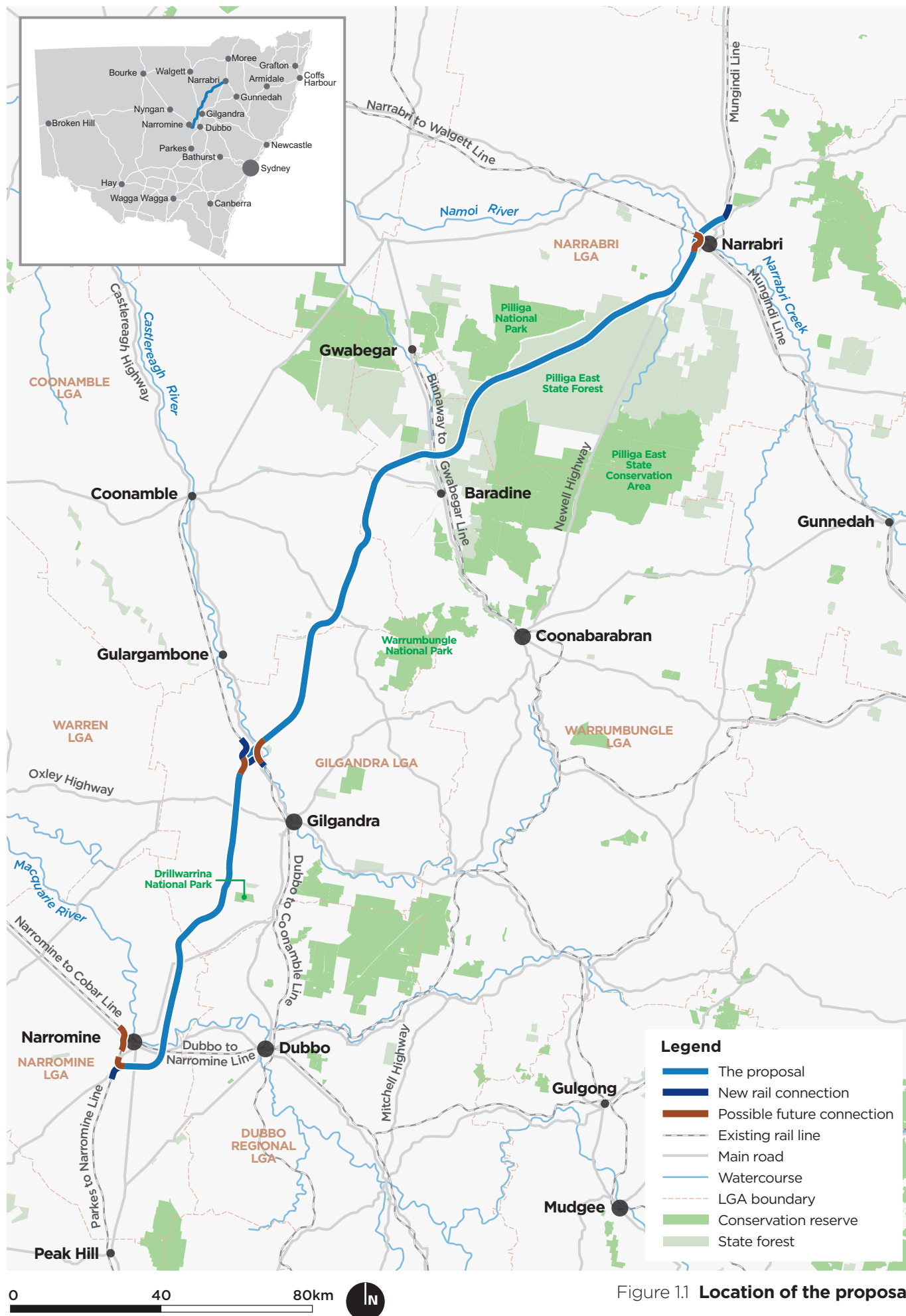


Figure 1.1 **Location of the proposal**

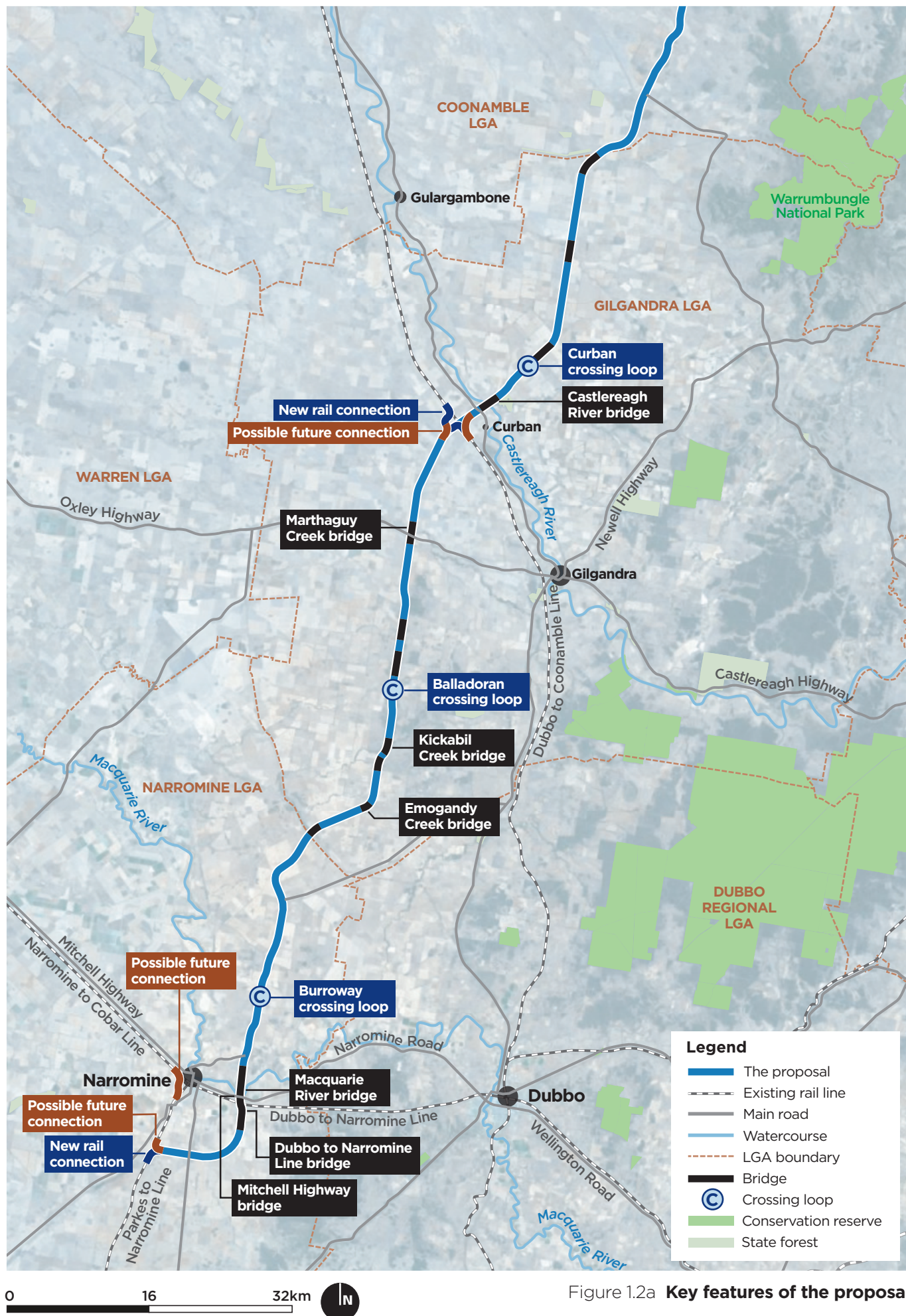


Figure 1.2a Key features of the proposal



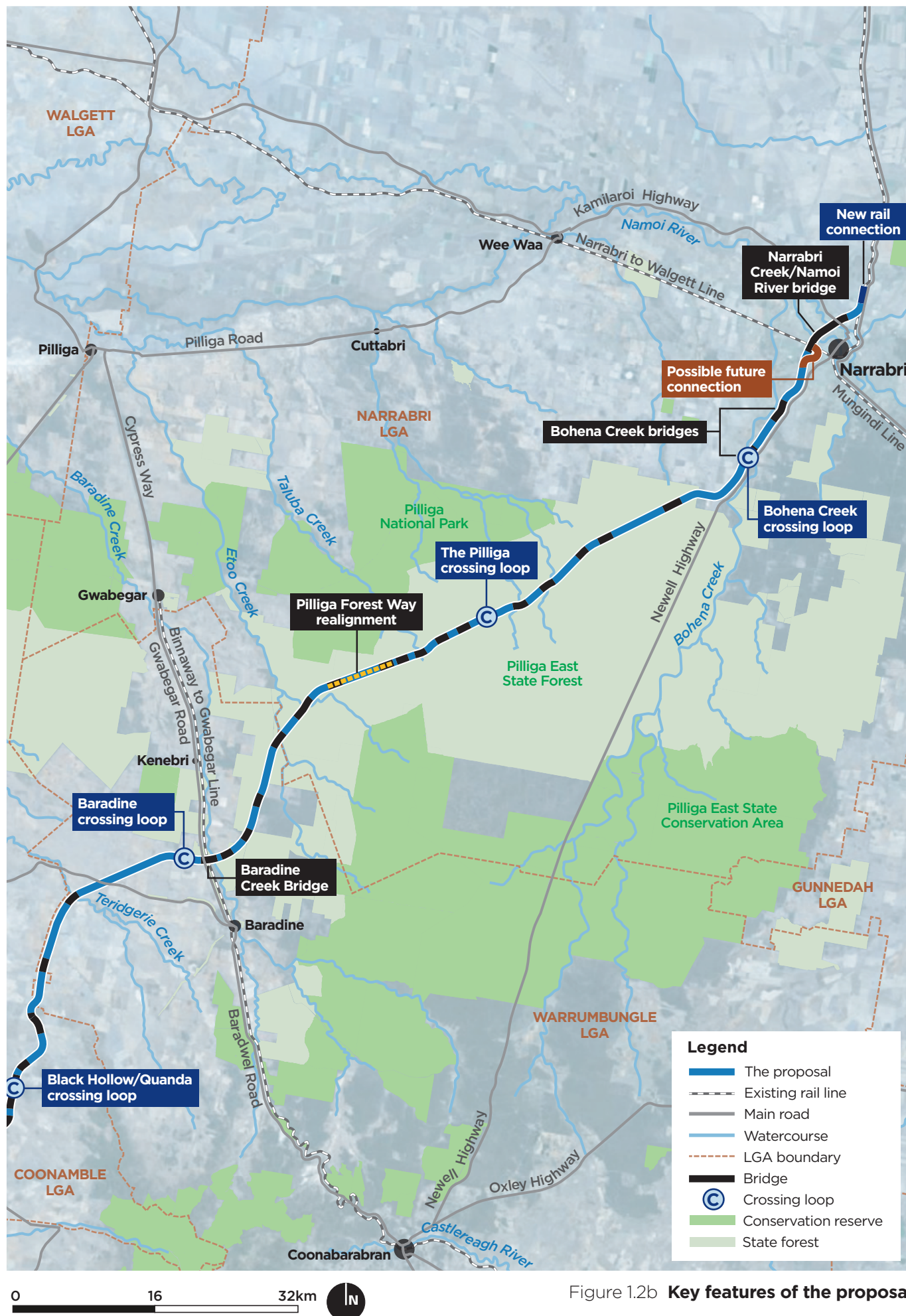


Figure 1.2b Key features of the proposal

### 1.2.3 Construction overview

An indicative construction strategy has been developed based on the current reference design to be used as a basis for the environmental assessment process. Detailed construction planning, including programming, work methodologies, staging and work sequencing would be undertaken once construction contractor(s) have been engaged and during detailed design.

#### *Timing and work phases*

Construction of the proposal would involve five main phases of work as outlined in Table 1.1. It is anticipated that the first phase would commence in late 2021, and construction would be completed in 2025.

**Table 1.1 Main construction phases and indicative activities**

Phase	Indicative construction activities
Pre-construction	<ul style="list-style-type: none"><li>Establishment of areas to receive early material deliveries</li><li>Delivery of certain materials that need to be bought to site before the main construction work</li></ul>
Site establishment	<ul style="list-style-type: none"><li>Establishment of key construction infrastructure, work areas and other construction facilities</li><li>Installing environmental controls, fencing and site services</li><li>Preliminary activities including clearing/trimming of vegetation</li></ul>
Main construction works	<ul style="list-style-type: none"><li>Construction of the proposed rail and road infrastructure, including earthworks, track, bridge and road works</li></ul>
Testing and commissioning	<ul style="list-style-type: none"><li>Testing and commissioning of the rail line and communications and signalling systems</li></ul>
Finishing and rehabilitation	<ul style="list-style-type: none"><li>Demobilisation and decommissioning of construction compounds and other construction infrastructure</li><li>Restoration and rehabilitation of disturbed areas</li></ul>

#### *Key construction infrastructure*

The following key infrastructure is proposed to support construction of the proposal:

- borrow pits:
  - borrow pit A – Tantitha Road, Narromine
  - borrow pit B – Tomingley Road, Narromine
  - borrow pit C – Euromedah Road, Narromine
  - borrow pit D – Perimeter Road, Narrabri
- three main compounds, which would include a range of facilities to support construction ('multi-function compounds'), located at:
  - Narromine South
  - Curban
  - Narrabri West
- temporary workforce accommodation for the construction workforce:
  - within the Narromine South multi-function compound
  - Narromine North
  - Gilgandra
  - Baradine
  - within the Narrabri West multi-function compound.

Other construction infrastructure would include a number of smaller compounds of various sizes located along the proposal site, concrete batching plants, laydown areas, welding yards, a concrete pre-cast facility and groundwater bores for construction water supply.

The key construction infrastructure are shown in Figure 1.3.

#### **1.2.4 Operation**

The proposal would form part of the rail network managed and maintained by ARTC. Train services would be provided by a variety of operators. Inland Rail as a whole would be operational once all 13 sections are complete, which is estimated to be in 2025.

It is estimated that Inland Rail would be trafficked by an average of 10 trains per day (both directions) in 2025, increasing to about 14 trains per day (both directions) in 2040. This rail traffic would be in addition to the existing rail traffic using other lines that the proposal interacts with.

The trains would be a mix of grain, bulk freight, and other general transport trains. Total annual freight tonnages would be about 10 million tonnes in 2025, increasing to about 17.5 million tonnes in 2040.

Train speeds would vary according to axle loads, and range from 80 to 115 kilometres per hour.

### **1.3 Purpose and scope of this report**

The purpose of this report is to assess the potential social impacts from constructing and operating the proposal. The report:

- addresses the relevant SEARs listed in Table 1.2
- describes the existing social environment
- assesses the impacts of constructing and operating the proposal on communities
- recommends measures to mitigate and manage the impacts identified.

The methodology for the assessment is described in section 3, including other technical studies prepared for the EIS which have informed this Social Assessment (section 3.2).



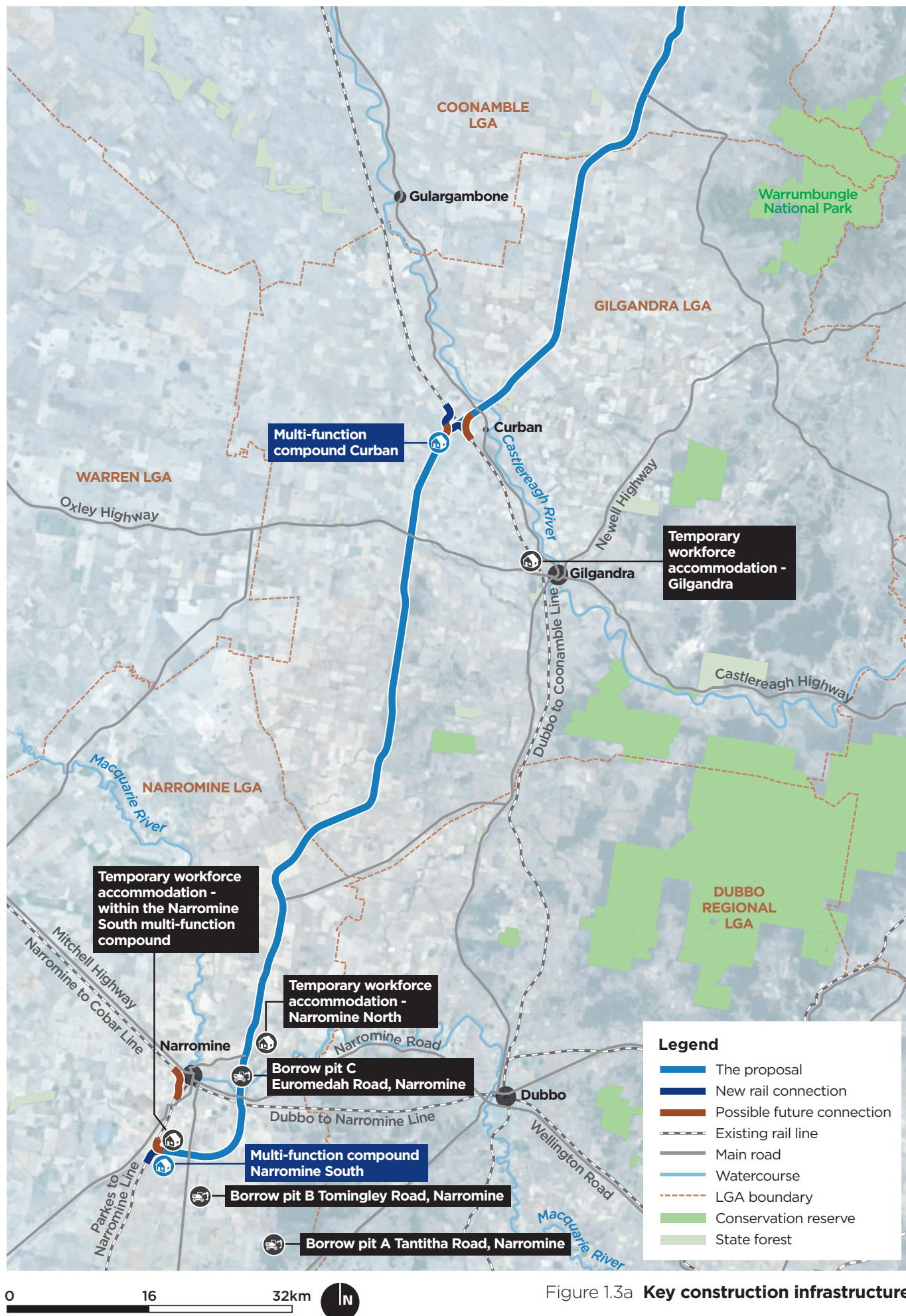


Figure 1.3a Key construction infrastructure



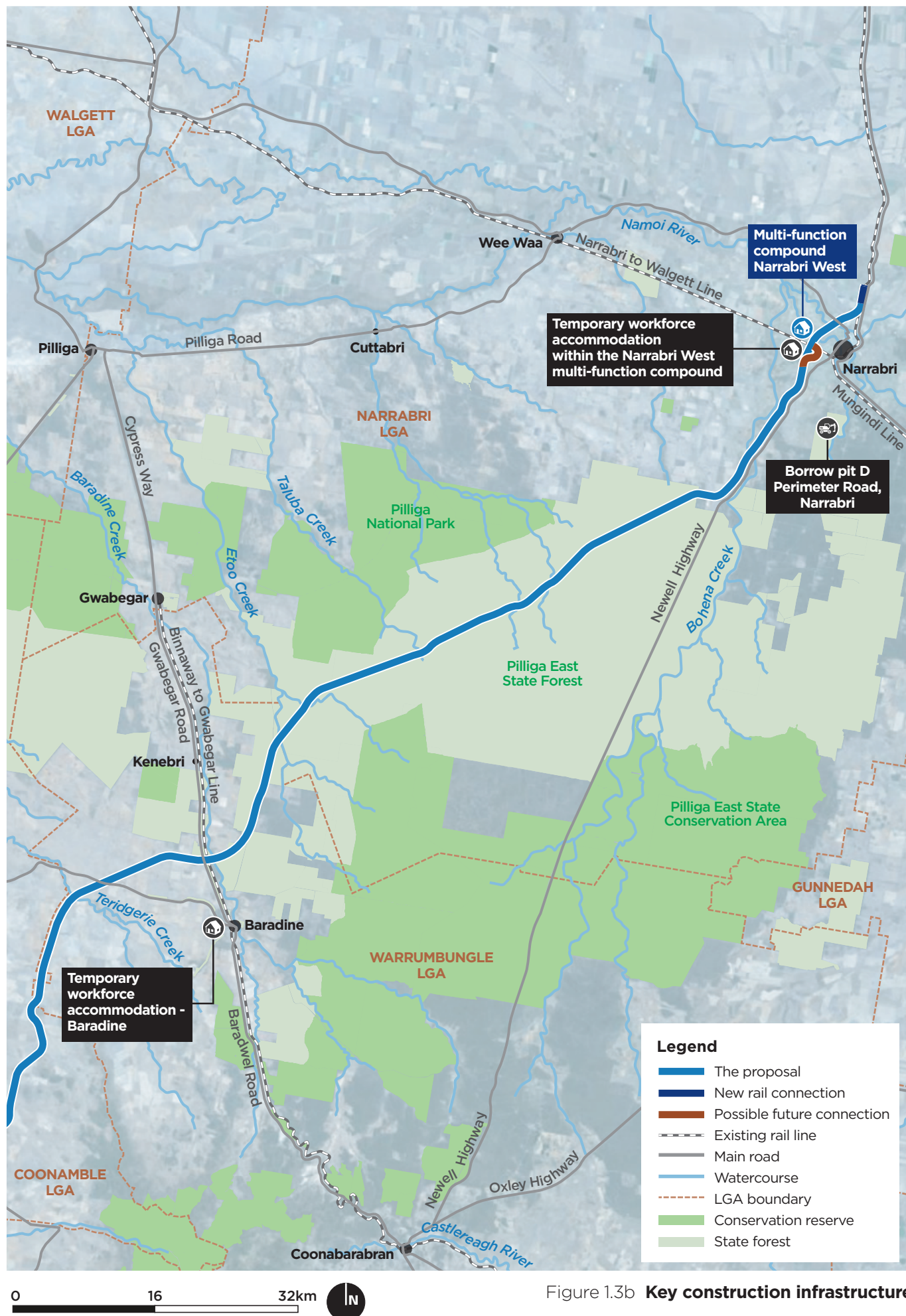


Figure 1.3b **Key construction infrastructure**

**Table 1.2 SEARs relevant to this assessment**

SEAR No.	Requirements	Where addressed in this report
5.1	The Proponent must assess social and economic impacts in accordance with the current guidelines.	<p>Section 3 sets out the approach and methodology that was adopted to assess the social impacts of the proposal in accordance with the current guidelines, particularly the <i>Social Impact Assessment Guideline for State significant mining, petroleum production and extractive industry development</i> (DPE, 2017a).</p> <p>This includes scoping the social issues for investigation (section 4), preparing a social baseline (section 6), assessment of construction impacts (section 7), assessment of operation impacts (section 8) and assessment of cumulative impacts (section 9), and recommending appropriate mitigation measures (section 10).</p>
5.3.	The Proponent must assess impacts from construction and operation on potentially affected properties, businesses, recreational users and land and water users (for example, recreational and commercial fishers), including property acquisitions/adjustments, access, amenity and relevant statutory rights.	<p>The potential social impacts resulting from construction in relation to properties and agricultural businesses on these properties such as property acquisitions/adjustments, access changes and relevant statutory rights are discussed in section 7.3. Social impacts resulting from operation in relation to these issues are discussed in section 8.3.</p> <p>Potential social impacts resulting from construction in relation to amenity are discussed in section 7.5 and section 7.7.2, and potential impacts resulting from operation in relation to amenity are discussed in sections 8.5 and 8.7.1.</p> <p>Potential social impacts resulting from construction in relation to access are discussed in section 7.6, and potential impacts resulting from operation in relation to access are discussed in section 8.6.</p> <p>Potential social impacts resulting from construction of the proposal users of social and recreation and infrastructure which includes land and water users are discussed in section 7.7.</p> <p>Potential social impacts from operation for these users are discussed in section 8.7.</p>
5.4.	The Proponent must consider the capacity for communities along or near the rail corridor to house construction workers in existing accommodation. Where temporary accommodation for construction workers (construction camps) is proposed, the Proponent must assess their social and economic impact on local communities.	<p>Section 6.6 presents the existing situation in the study area in relation to housing and accommodation. Section 7.4 assesses the potential impacts of a non-resident construction workforce on local accommodation and housing.</p> <p>Section 7.1.2 discusses the potential economic impacts of temporary workforce accommodation, sections 7.5.1 and 7.5.3 discuss potential amenity impacts due to temporary workforce accommodation facilities.</p> <p>Section 7.5.4 discusses potential impacts on community wellbeing and safety, section 7.6 discusses potential traffic impacts, and section 7.7.3 discusses potential impacts on social infrastructure from a non-resident workforce.</p>

SEAR No.	Requirements	Where addressed in this report
5.5	The Proponent must identify opportunities and processes to prioritise local participation practices to source construction and operation employment, goods and services from communities along or near the rail alignment.	Section 7.1.2 discusses ARTC's approach to maximising opportunities for local procurement in construction and section 7.2 discusses ARTC's approach to maximising local employment opportunities during construction. Section 8.1 discusses ARTC's approach to local procurement during operation, and section 8.2 discusses employment opportunities during operation.

Other SEARs listed under 'Socio-economic, Land Use and Property' are addressed in the following reports prepared for the EIS:

- *ARTC Inland Rail Narromine to Narrabri Economic Assessment* (KPMG, 2020)
- *ARTC Inland Rail Narromine to Narrabri Agriculture and Land Use Assessment* (JacobsGHD, 2020a).

## 1.4 Structure of this report

The structure of the report is as follows:

- Section 1 – provides an introduction to the report, including a description of the proposal
- Section 2 – outlines the planning and policy context
- Section 3 – describes the methodology for the assessment
- Section 4 – describes how the scope of this Social Assessment was determined
- Section 4.2 – outlines the key themes and issues raised by stakeholders and communities during consultation activities
- Section 6 – describes the existing social conditions for the local and regional study area
- Section 7 – identifies and describes the potential social impacts arising from construction of the proposal
- Section 8 – identifies and describes the potential social impacts arising from operation of the proposal
- Section 9 – identifies and describes the potential cumulative impacts of the proposal
- Section 10 – outlines the recommended impact mitigation and management measures for the identified impacts
- Section 11 – provides a conclusion to the report.

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## 2 Legislative and policy context

This section provides an overview of government policy and strategic documents relevant to this Social Assessment. These primarily relate to employment and procurement, transport planning, regional development, and community planning.

### 2.1 Relevant legislation

#### 2.1.1 Commonwealth legislation

The EPBC Act provides for the protection of nationally significant environments, including the implementation of measures consistent with Australia's international environmental responsibilities. It provides a legal framework to protect and manage prescribed Matters of National Environmental Significance (MNES).

Under the EPBC Act, an action will need approval from the Minister for the Environment if the action has, will have, or is likely to have a significant impact on MNES. The proposal has been declared a controlled action and approval under the EPBC Act is required, but only in relation to specified threatened species and ecological communities which are listed under the EPBC Act.

#### 2.1.2 NSW legislation

##### *NSW Environmental Planning and Assessment Act 1979*

The proposal is State significant infrastructure by operation of Part 5, Division 5.2 of the EP&A Act, *State Environmental Planning Policy (State and Regional Development) 2011* and *State Environment Planning Policy (Infrastructure) 2007*. As State significant infrastructure, the proposal needs approval from the NSW Minister for Planning and Public Spaces, and the application for approval must be supported by an EIS. The EIS needs to be prepared in accordance with the SEARs, which have been issued for that purpose by the Secretary of the Department of Planning, Industry and Environment (DPIE). A copy of the relevant SEARS for this Social Assessment, and where they have been addressed in this report is provided in section 1.3.

The objectives of the EP&A Act are to:

- a. promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources
- b. facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment
- c. promote the orderly and economic use and development of land
- d. promote the delivery and maintenance of affordable housing
- e. protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats
- f. promote the sustainable management of built and cultural heritage including Aboriginal cultural heritage
- g. promote good design and amenity of the built environment
- h. promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants



- i. promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State
- j. provide increased opportunity for community participation in environmental planning and assessment.

These objectives have informed the overall approach to this Social Assessment.

## **2.2 Australian Government policies, plans and strategies**

### **2.2.1 Industry participation and Indigenous procurement**

There are several Australian Government programs and policies related to industry participation and Indigenous procurement which ARTC would give regard to in developing procurement requirements for the proposal. These are summarised below.

#### ***Australian Industry Participation National Framework***

The *Australian Industry Participation National Framework* (Australian Government, 2001) provides a nationally consistent approach to maximise Australian industry participation in investment projects. The Framework notes that there is considerable economic significance of Australian industry participation, including wealth and employment creation, increased standards of living and skills enhancement. The proposal may also contribute to these benefits by complying with the Framework and maximising Australian industry involvement in the construction and operation of the proposal.

#### ***Commonwealth Indigenous Procurement Policy 2015***

The primary purpose of the *Commonwealth Indigenous Procurement Policy* (Australian Government, 2015) is to stimulate Indigenous entrepreneurship and business development by providing Indigenous Australians with more opportunities to participate in the economy. The policy has three key components:

1. A target for purchasing from Indigenous businesses: three per cent of all Australian Government domestic contracts to Indigenous businesses each financial year from 2019-2020.
2. A mandatory set-aside to direct some Commonwealth contracts to Indigenous businesses: This gives Indigenous businesses the chance to demonstrate value for money first before the procurement goes to market. It applies to all remote procurements and all other new domestic procurement where the estimated value of the procurement is from \$80,000 to \$200,000 (inclusive of GST).
3. Minimum Indigenous participation requirements for certain Commonwealth contracts: Apply to all new contracts delivered in Australia that are valued at \$7.5 million (GST inclusive) or more, where more than half the contract value is spent on specified industries. Additional requirements are subject to project specifics.



## 2.3 NSW Government policies, plans and strategies

### 2.3.1 Social impact assessment guidelines

#### *Social impact assessment guideline for State significant mining, petroleum production and extractive industry development (DPE, 2017)*

The *Social impact assessment guideline for State significant mining, petroleum production and extractive industry development* (SIA Guideline) was published by the then Department of Planning and Environment (DPE) (now DPIE) in 2017. They were the first SIA guidance provided by DPE. Despite their focus on State significance mining, petroleum production and extractive industry development industries, they can be applied to all State significant projects in NSW. The SIA Guideline provides direction on assessing positive and negative social impacts in the context of the Environment Impact Assessment process, under the EP&A Act. The Social Assessment has had regard to this guideline.

A scoping tool forms part of the SIA Guideline, which helps to identify potential social impacts or benefits and to decide on the assessment approach for each potential impact. In some cases, the scoping tool is completed alongside a scoping report, which is submitted as part of the State significant infrastructure application/request for the SEARs. The scoping tool was completed to inform the scoping of this Social Assessment. Section 4 describes the scoping process and Appendix A presents the SIA worksheet from the scoping tool.

#### *Environmental Planning and Impact Assessment Practice Note: Socio-Economic Assessment (Roads and Maritime Services, 2013)*

Transport for NSW (TfNSW) released an updated version of the *Environmental Planning and Impact Assessment Practice Note: Socio-economic Assessment* in January 2020. The Practice Note provides guidance for how to assess socio-economic impacts of transport projects to ensure impact assessment are carried out consistently, and are properly integrated with other environmental assessments. This iteration of the Practice Note, originally published by Roads and Maritime Services in 2013, provides a tool for assessing the significance of negative social impacts, through the identification of the magnitude and sensitivity of each impact to a community or business. The Practice Note was considered in the development of the project-specific methodology for this Social Assessment.

### 2.3.2 Employment and procurement policies

There are several NSW Government programs and policies related to employment and procurement which ARTC would have regard to in developing employment and procurement requirements for the proposal. These are summarised below.

#### *Infrastructure Skills Legacy Program*

The *Infrastructure Skills Legacy Program* (Department of Industry, 2017) is administered by Training Services NSW. The aim of the program is to increase the number of skilled construction workers, and create new employment pathways across NSW. This is achieved through establishing skills training and employment targets to increase diversity in the workplace. Targets include:

- 20 per cent of the total labour force of a project to be made up of 'learning workers' (trainees and workers who need to update qualifications)
- 20 per cent of trades positions to be apprentices
- double number of female trades workers

- 1.5 per cent total contract value to support Aboriginal and Torres Strait Islander participation
- 8 per cent of workforce aged less than 25 years
- strategies to ensure projects employ and train people from local region.

### ***NSW Government Aboriginal Procurement Policy 2018***

Government procurement provides a significant opportunity to increase Aboriginal skills and economic participation by leveraging its procurement capacity. The *Aboriginal Procurement Policy* (NSW Government, 2018) aims to support an estimated 3,000 full time equivalent employment opportunities for Aboriginal people through new Government procurement activities by 2021. The Policy also aims for Aboriginal owned businesses to be awarded at least three per cent of the total number of domestic contracts for goods and services issues by NSW Government agencies by 2021.

### ***NSW Public Sector Aboriginal Employment Strategy 2019-2025***

*NSW Working Together for a better future: the NSW Public Sector Aboriginal Employment Strategy* (Public Service Commission, 2019) sets out key initiatives to be implemented across the NSW public sectors and agencies from 2019-2025. The strategy outlines two commitments:

- enable Aboriginal employees to fill at least 114 NSW public sector senior leadership roles
- have three per cent Aboriginal employees of all staff in non-executive salary classes.

In order to achieve these commitments, the strategy has three elements:

- build a talent pipeline by attracting more Aboriginal people to work in NSW public sector
- improve Aboriginal cultural capability in public sector
- engage with Aboriginal workforce to help meet targets.

### **2.3.3 Regional plans**

Regional plans set the framework, vision and direction for strategic planning and land use, planning for future needs for housing, jobs, infrastructure, a healthy environment and connected communities. DPIE works in close collaboration with other government agencies, councils, industry and local communities to deliver priority actions of the regional plans.

The proposal and study area for this assessment (refer to section 4.3.2) traverse two different planning regions:

- the Central West and Orana Region includes Narromine, Gilgandra, Coonamble and Warrumbungle and Dubbo<sup>1</sup>, local government areas (LGAs)
- the New England North West Region includes Narrabri LGA.

The vision and goals for each plan relevant to these regions are summarised below. Overall, the proposal would support the goals related to diversifying the economy, employment, and enhancing freight. This study assesses the social impacts of the proposal, and makes recommendations for how they can be mitigated to support the visions related to healthy, vibrant and thriving communities.

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<sup>1</sup> The regional study area also includes Dubbo Regional LGA as Dubbo is a major regional centre located close to the proposal and provides access to employment and services for communities along the proposal site.

### **Central West and Orana Regional Plan 2036**

*The Central West and Orana Regional Plan 2036* (DPE, 2017) is the NSW Government's strategy for guiding land use planning decisions for the Central West and Orana region for the next 20 years. The plan sets out four goals for the region, including:

- the most diverse regional economy in NSW
- a strong, healthier environment and diverse heritage
- quality freight, transport and infrastructure networks
- dynamic, vibrant and healthy communities.

The plan outlines a number of challenges facing the region, such as its ageing population, increasing freight volumes and climate change. It also acknowledges that Inland Rail would provide capacity and connectivity for agribusiness, manufacturing, tourism and mining, and that rail investment would facilitate a more efficient network, making the region a nationally significant freight hub.

### **New England North West Regional Plan 2036**

*The New England North West Regional Plan 2036* (DPE, 2017d) outlines the vision for the region, which is "nationally valued landscapes and strong successful communities from the Great Dividing Range to the rich black soil plains". To achieve this vision the Government has acknowledged the opportunities provided by the region's rich natural resources and strong communities and set the following regionally focused goals:

- a strong and dynamic regional economy
- a health environment with pristine waterways
- strong infrastructure and transport networks for a connected future
- attractive and thriving communities.

The plan acknowledges that the freight and logistics industries will be a focus for investment to grow social and economic ties across communities and borders, and that Inland Rail has the potential to reshape freight movements to accommodate the forecast growth of freight movements. It also acknowledges that Narrabri LGA is developing a transport and manufacturing hub masterplan that will take advantage of investment in rail infrastructure.

## **2.4 Local government**

This section provides a summary of the community plans for each LGA traversed by the proposal. Dubbo Regional LGA has also been included as Dubbo is a major regional centre located close to the proposal site and provides access to employment and services for communities along the proposal site. Community strategic plans guide each LGA and their respective community visions are outlined in Table 2.1.

**Table 2.1 LGA community strategic plans**

LGA	Community plan	Community vision
Narromine Shire	<i>Community Strategic Plan: Narromine Shire 2027</i> (Narromine Shire Council, 2017)	'A friendly place to live with a strong sense of community that values our services, facilities and our natural rural environment.'
Gilgandra Shire	<i>Gilgandra Shire Council Community Strategic Plan 2017/18 – 2026/27</i> (Gilgandra Shire Council, 2017)	'Gilgandra Shire is a strong and sustainable rural centre with a caring community that is building a future together.'
Coonamble Shire	<i>Coonamble Shire 2032 Community Strategic Plan</i> (Coonamble Shire Council, 2017)	'Coonamble Shire is a connected, respectful and diverse community, working together in a health natural environment that supports our vibrant local economy.'
Warrumbungle Shire	<i>Warrumbungle Shire Community Strategic Plan (Reviewed) 2017-2032</i> (Warrumbungle Shire Council, 2017)	'What is most important to us is; our sense of community spirit, our children and our homes. Our plan for the future will support the growth, resilience and health of our people, our neighbourhoods, the environment and local economy.'
Narrabri Shire	<i>Narrabri Shire Community Strategic Plan 2017 – 2027</i> (Narrabri Shire Council, 2017)	'Narrabri Shire will be a strong and vibrant regional growth centre providing a quality living environment for the entire Shire community.'
Dubbo Regional	<i>Dubbo Regional Council 2040 Community Strategic Plan</i> (Dubbo Regional Council, 2018)	'In 2040, we will celebrate our quality of life, the opportunities available for us to grow as a community, our improved natural environment, and being recognised as the inland capital of regional NSW.'

The community strategic plans were developed in consultation with the respective communities. A number of common challenges were outlined across the community strategic plans, including:

- population decline and ageing population, including outmigration of young people
- increasing costs of services, facilities and maintenance of assets and infrastructure
- agricultural sector decline, including a decline in employment numbers in the agriculture industry
- skill and labour shortages presenting a barrier to diversifying the economy.

Based on the challenges identified in the community strategic plans, the LGAs outline broad aspirations for their communities, including to:

- grow the economy and to increase diversity that offer a range of employment opportunities
- provide a safe, inclusive and connected community
- preserve the natural environment and biodiversity
- encourage employment and skills development
- improve infrastructure and services.

Some LGAs identify aspirations relevant to the proposal within their community strategic plans, including in:

- Narramine Shire – to develop an Inland Rail hub west of town and to capture value from freight movements.
- Gilgandra Shire – to maximise economic benefit of Inland Rail construction and ongoing operation.
- Coonamble Shire – to support Inland Rail route through Coonamble, and to improve the region's freight transport networks and access to external markets.
- Narrabri Shire – to explore opportunities for increasing efficiency of freight movements in the region and to establish a freight hub for Northern Inland Region.

Community values and aspirations of each LGA are described further in section 6.

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## 3 Assessment methodology

This section describes the overall approach and detailed methodology undertaken to complete this Social Assessment.

### 3.1 Overview

The SEARs require the Social Assessment to be undertaken in accordance with the following guidelines:

- SIA Guideline (DPE, 2017a).
- *Environmental Planning and Impact Assessment Practice Note: Socio-economic Assessment* (Roads and Maritime Services, 2013). Note an updated version was released by TfNSW in 2020 which replaces the 2013 version. The latest practice note has been used in this report.

According to these guidelines (DPE, 2017a, TfNSW, 2020), the overall matters to be addressed in the Social Assessment are mainly related to changes to people's:

- way of life, including how people live, work, play and interact with one another on a daily basis
- access, including how people move about in their area for personal or business purposes and access to and use of infrastructure, services and facilities
- community, including the level of community cohesion, local character and sense of place
- culture, including shared beliefs, customs and values, attachment to land and places, and sense of belonging
- physical and psychological health and wellbeing, including stress levels, happiness and sense of security
- assets, such as property, housing or business
- fears and aspirations, including perceptions about safety and their fears about, and aspirations for, the future of their community
- employment, including location, availability and types of employment and labour force availability
- environment, including the quality of the air and water people use, the level of hazard or risk, dust and noise they are exposed to and their physical safety.

Section 4 of this report details how these social matters have been considered through scoping of the Social Assessment.

### 3.2 Detailed methodology

Social impact assessment is the process of identifying, predicting, evaluating and developing responses to the social impacts of a proposal (DPE, 2017a). Key steps in the assessment include scoping of social issues, describing the existing environment, identifying and assessing potential social benefits and impacts, and identifying measures to manage or mitigate the proposal's potential impacts and maximise potential benefits. The steps involved are explained further below.

### **3.2.1 Scoping of social issues and identification of social study area**

Scoping highlights which elements of the natural or human environment are expected to be impacted by activities associated with projects, whether negatively or positively, and how these impacts should be assessed and to what level of detail (DPE, 2017a).

Overall, there were two core objectives that were met during the scoping phase of the Social Assessment:

- The proposal's area of social influence (social study area) was identified.
- Social risks and issues generated as a result of the proposal requiring further investigation in the EIS were identified and assigned a proportionate level of assessment.

Section 4 provides a description of the scoping phase and the areas for investigation in the Social Assessment. Appendix A presents the SIA worksheet from the scoping tool.

### **3.2.2 Developing the social baseline**

A description of the existing social characteristics and community dynamics was compiled to form the basis for predicting or measuring the potential social benefits and impacts of the proposal. The existing social environment (also referred to as the social baseline) was developed for the local study area and the regional study area.

For the local study area, the social baseline describes the following social characteristics and issues:

- estimate of the population and overview of demographic characteristics
- property characteristics, including land use and access points
- amenity
- local roads and connectivity
- places of social and cultural value.

For the regional study area, the social baseline describes the following social characteristics and issues:

- demographic characteristics for each LGA, including population, age and gender, mobility, dwellings and households, and labour force
- community infrastructure and facilities for each LGA, including emergency services, health, community and cultural venues, sport and recreation facilities, open spaces, education and accommodation providers
- community lifestyle, values and aspirations for each LGA
- business and industry
- employment and workforce availability, including the most up to date data on unemployment (only available at the Statistical Area 4 level)
- socio-economic advantage and disadvantage
- accommodation and housing
- travel behaviour.

Qualitative and quantitative data and information for the social baseline were gathered from the following sources:

- Australian Bureau of Statistics (ABS) Census 2016
- websites and publications of councils in the regional study area



- NSW Government agencies, including DPIE, to source population projections
- information from stakeholder consultation, site visits, and information from other technical studies undertaken as part of the EIS
- published research, including peer-reviewed publications.

### **3.2.3 Community and stakeholder engagement**

ARTC has been undertaking a comprehensive engagement program with community and stakeholders throughout the proposal planning and design process. Chapter 4 of the EIS and Appendix C describe these activities, stakeholders engaged and issues raised. An overview of relevant issues that have been considered in the assessment of potential social impacts is provided in section 5.

In addition to ARTC's consultation program, extensive consultation activities were undertaken to inform the preparation of the Social Assessment. Section 5 of this Social Assessment presents a summary of the consultation activities and outcomes relevant to this assessment. The overall purpose of these consultations was to validate and gather additional information to inform the development of the social baseline, and the identification of potential social benefits and impacts, and development of recommended mitigation and management measures. The stakeholders consulted for the Social Assessment were identified based on their understanding of the social context and potential social impacts of the proposal, or because they would experience positive or negative social impacts as a result of the proposal.

### **3.2.4 Description and assessment of social benefits and impacts**

In this Social Assessment, the definition of social impact is based on the SIA Guideline (DPE, 2017a). The guideline defines a social impact as a consequence experienced by people due to changes associated with a proposal.

Following the scoping of social issues described in section 4, social impacts were confirmed using a data triangulation method, using multiple sources of information to confirm the social impacts. The social impact identification was informed by the following sources of information:

- review of the proposal description for the EIS to understand the proposed activities that would influence social aspects
- detailed understanding of the baseline conditions within the existing social environment to create the basis against which the social changes/impacts will be measured
- outcomes of the stakeholder consultation undertaken for the Social Assessment and the proposal as a whole to understand the existing environment and stakeholder views on potential social changes brought about by the proposal
- literature review, including other social impact assessments undertaken for similar projects or for other projects in NSW and more broadly, community and regional plans applicable to the study area, and relevant information and documents shared by stakeholders
- findings of relevant technical studies prepared for the EIS to gather technically sound evidence to identify and assess the social changes resulting from the proposal. These are summarised below:
  - *ARTC Inland Rail Narromine to Narrabri Agriculture and Land Use Assessment* (JacobsGHD, 2020a) - provides evidence to analyse the potential impacts on landowners and landholders and their agricultural properties as a result of the proposal.

- *ARTC Inland Rail Narromine to Narrabri Traffic and Transport Assessment* (JacobsGHD, 2020b) – provides evidence to analyse the potential social implications of changes to the general community and emergency services from traffic and transport related changes that would occur as a result of the proposal.
- *ARTC Inland Rail Narromine to Narrabri Landscape and Visual Assessment* (JacobsGHD, 2020c) – provides evidence on how potential visual changes as a result of the proposal affect the amenity values of residents and social and recreation infrastructure users.
- *ARTC Inland Rail Narromine to Narrabri Flooding and Hydrology Assessment* (JacobsGHD, 2020d) – provides evidence to understand the potential implications of flooding on communities.
- *ARTC Inland Rail Narromine to Narrabri Noise and Vibration Assessment – Construction and Other Operations* (JacobsGHD, 2020f) – provides evidence to understand how changes to noise levels and vibration as a result of construction could affect residents located close to construction activities, and affect use or enjoyment of social infrastructure / recreation areas close to construction areas.
- *ARTC Inland Rail Narromine to Narrabri Aboriginal Cultural Heritage Assessment* (JacobsGHD, 2020g) – provides evidence for how the proposal may affect community values related to Aboriginal cultural heritage.
- *ARTC Inland Rail Narromine to Narrabri Non-Aboriginal Heritage Assessment and Statement of Heritage Impact* (JacobsGHD, 2020h) – provides evidence for how the proposal may affect community values related to non-Aboriginal heritage.
- *ARTC Inland Rail Narromine to Narrabri Noise and Vibration Assessment – Operational Rail* (SLR, 2020) – provides evidence on how changes to noise levels and vibration as a result of operation of the proposal would affect residents located close to the new railway line, and affect use or enjoyment of social infrastructure / recreation areas close to railway operations.
- *ARTC Inland Rail Narromine to Narrabri Economic Assessment* (KPMG, 2020) – provides evidence to understand the economic benefits and impacts of the proposal for regional and local communities.

The evaluation of the identified social impacts was undertaken using a likelihood and consequence significance rating, based on the following considerations:

- baseline conditions as a basis against which the impacts were measured
- type of impact whether it was direct or indirect
- who was going to be impacted
- when was the potential impact expected to occur, during which phase of the proposal (planning and design, construction and operation) and for how long was the impact expected to last
- sensitivity and adaptability of stakeholders who would experience the impact
- extent and severity of the potential impact meaning how far and how many would experience the impact and at what intensity

- duration of the potential impact, whether it will be a short term or long term change in the baseline conditions, with short term associated with intermittent and temporary changes during the construction phase and long term associated with continuous permanent changes
- subjective nature of social impacts, it is recognised that social impacts are often experienced and perceived differently by different people based on their capacity to cope and adapt to the change.

Table 3.1, Table 3.2 and Table 3.3 define the significance criteria applied for the assessment of social impacts.

**Table 3.1 Definitions of likelihood of impact**

Likelihood level	Description
Almost certain	Will occur, or is of a continuous nature. The impact will occur frequently. The event is expected to occur in most circumstances. Impact could occur once a month or more.
Likely	The probability of the occurrence is high. Likely to have been a similar incident occurring in similar environments. The event will probably occur in many circumstances. Could occur once a month or once a year.
Possible	The event could occur. May occur some of the time but a distinct possibility it would not. The impact could occur on average once in one to five years.
Unlikely	The probability of the occurrence is low. May occur in some circumstances but not anticipated. Could occur once in five to 20 years.
Rare	The probability of the occurrence is negligible. Only likely to occur in exceptional circumstances. Not likely to occur in the next 20 years.

**Table 3.2 Definition of consequence of impact**

Consequence category	Description of negative impact	Description of benefits (positive impacts)
Catastrophic	Irreversible changes to social characteristics and values of the communities of interest or community has no capacity to adapt and cope with change. Significant change from the baseline conditions.	-
Major	Long-term recoverable changes to social characteristics and values of the communities of interest or community has limited capacity to adapt and cope with change. Substantial change from baseline conditions.	Long-term opportunities derived from the project, directly and indirectly benefiting broader community.
Moderate	Medium-term recoverable changes to social characteristics and values of the communities of interest or community has some capacity to adapt and cope with change. Noticeable change from the baseline conditions.	Medium-term opportunities derived from the project, directly and indirectly benefiting broader community.

Consequence category	Description of negative impact	Description of benefits (positive impacts)
Minor	Short-term recoverable changes to social characteristics and values of the communities of interest or community has substantial capacity to adapt and cope with change. Small change from the baseline conditions.	Short-term opportunities derived from the project, directly benefiting specific groups in the community.
Minimal	Local, small-scale, easily reversible change on social characteristics or values of the communities of interest or communities can easily adapt or cope with change. Marginal or not change from the baseline conditions.	Local small-scale opportunities derived from the project that the community can readily pursue and capitalise on or directly benefiting specific groups in the community.

**Table 3.3 Impact significance rating**

			Consequence level				
			1	2	3	4	5
			Minimal	Minor	Moderate	Major	Catastrophic
Likelihood Level	A	Almost certain	A1	A2	A3	A4	A5
	B	Likely	B1	B2	B3	B4	B5
	C	Possible	C1	C2	C3	C4	C5
	D	Unlikely	D1	D2	D3	D4	D5
	E	Rare	E1	E2	E3	E4	E5
Social Risk Rating							
	Low		Moderate		High		Extreme

The risk rating then determines if mitigation or management actions are required to address the social impact. Negative social impacts with a risk rating of moderate, high or extreme require mitigation or management actions.

This Social Assessment has assessed the potential social impacts and benefits that may occur as a result of construction of the proposal (section 7), operation of the proposal (section 8), and the cumulative social impacts that may occur as a result of other major projects in vicinity of the proposal (section 9).

### 3.2.5 Recommended social impact mitigation measures

The recommended social impact mitigation and management strategies provided in this report seek to both enhance the benefits for stakeholders and communities, and manage or mitigate negative impacts from the proposal. The Social Assessment also references various EIS technical studies for mitigation/management of specific impacts. The recommended social impact mitigation measures are generally grouped together to address the following aspects:

- community and stakeholder engagement
- workforce management
- housing and accommodation
- local business and industry content
- community health and wellbeing.

The recommended mitigation and management strategies were developed using adaptive management principles, recognising that impacts may change over time, and that ongoing monitoring of impacts would provide the flexibility to accommodate such changes.

Section 10 presents the recommended mitigation measures. It also provides the recommended mitigation measures for each social impact and benefit identified in section 7 and section 8, and re-assesses the likelihood and consequence of the impact assuming implementation of the mitigation measures.

It should be noted that the degree to which community members would experience social impacts would vary based on various factors such as perceptions and individual values, sensitivity to change, distance from the proposal, and duration people experience the impacts over. The assessment of residual risks takes this into consideration, however has applied a risk rating for the majority of stakeholders affected by the identified potential impact. However the risk rating would likely be higher or lower for some stakeholders.

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## 4 Scope of the Social Assessment

This section describes the scoping process for this Social Assessment. There are two objectives of the scoping phase, to identify the:

- potential social risks and issues requiring further investigation
- social area of influence or social study area.

The steps taken to achieve these objectives are described in the sections below.

### 4.1 Scoping of social issues

The potential social issues and areas for investigation in this Social Assessment were identified based on information gathered from the following:

- a review of EIS documents prepared for other projects in the surrounding region, including Parkes to Narromine and Narrabri to North Star sections of Inland Rail
- strategic plans and community plans for the region (section 2)
- outcomes of community engagement undertaken for the proposal by ARTC, including inputs from CCC (section 5.1), and Social Assessment consultations (section 5.2)
- comments from agencies and stakeholders provided to DPIE to inform the SEARs
- findings of other technical studies prepared for the proposal EIS (listed in section 3.2.4).

The scoping of issues was initially facilitated through completing the SIA Scoping Tool which is contained within the SIA Guideline (DPE, 2017a). The scoping tool was completed in two steps:

- EIS worksheet – identifies which environmental matters associated with the proposal need to be investigated in the social impact assessment.
- SIA worksheet – confirms the social impacts that are considered likely to occur, and the level of assessment for each social impact.

Appendix A includes the completed SIA worksheet. Table 4.1 below provides a summary of the scoping process for this Social Assessment, which shows:

- the environmental matters identified in the SIA Guideline
- a description of the potential social issues that are expected to occur as a result of construction and operation of the proposal based on the information sources discussed above
- the corresponding social impact categories as described in the SIA Guideline (described in section 3.1)
- the preliminary assessment of impacts.

**Table 4.1 Scoping of potential social issues and preliminary assessment**

Environmental matters as per SIA Guideline	Description of issues and justification	Social impact areas addressed as per SIA Guideline	Preliminary assessment
Amenity – acoustic, visual, odour, microclimate (Section 7.5)	Communities and residents that live or would come close to construction activities have the potential to hear the construction noise, experience dust and visual changes due to the views of construction site, compounds and workforce accommodation. These changes would be temporary during the construction phase, especially as work fronts are expected to move along the proposal site. Rural communities used to a quiet environment may be more sensitive to these impacts.	Way of life Community Surroundings	<p><b>Duration:</b> Temporary, during construction period</p> <p><b>Extent:</b> Moderate - experienced across local study area and community members living in close proximity</p> <p><b>Severity:</b> Low to high depending on proximity of community members to construction activities and duration of noise impacts for example</p> <p><b>Sensitivity:</b> Moderate given most community members would be used to a rural and quiet surroundings</p>
Amenity – acoustic, visual, odour, microclimate (Section 8.5)	As a greenfield project, operation of the proposal would mean that community members living close to proposal site would have a new freight rail line operating nearby, with several trains per day. This may change the rural amenity of properties/communities close to the proposal.	Way of life Community Surroundings	<p><b>Duration:</b> Permanent impact</p> <p><b>Extent:</b> Moderate to high, depending on proximity of community members to rail line</p> <p><b>Severity:</b> Low to high depending on proximity of community members to rail line</p> <p><b>Sensitivity:</b> Moderate to high given most community members would be used to a rural and peaceful character</p>
Amenity – acoustic, visual, odour, microclimate (Section 7.5)	During construction there may be an increase in noise, vibration and dust, and changes in visual amenity for nearby social infrastructure and recreation areas. Depending on the use of each area, this could reduce enjoyment of these areas and amenity values. These changes would be temporary during the construction phase.	Way of life Community Surroundings	<p><b>Duration:</b> Temporary, during construction period</p> <p><b>Extent:</b> Low as likely to only affect users visiting these areas during construction period</p> <p><b>Severity:</b> Low to moderate depending on proximity of areas to construction activities and duration of noise impacts for example</p> <p><b>Sensitivity:</b> Low to moderate depending on the type of users and activities at the different areas/infrastructure that may be affected</p>



Environmental matters as per SIA Guideline	Description of issues and justification	Social impact areas addressed as per SIA Guideline	Preliminary assessment
Amenity – acoustic, visual, odour, microclimate (Section 8.5)	During operation trains travelling along the new rail line could lead to increase in noise and vibration and changed visual amenity for nearby social infrastructure and recreation areas. Depending on the use of each area, this could reduce enjoyment of these areas and amenity values. However most users are expected to adapt over time to these amenity changes.	Way of life Community Surroundings	<b>Duration:</b> Permanent impact <b>Extent:</b> Low to moderate, depending on proximity of social infrastructure or recreation areas to rail line <b>Severity:</b> Low to moderate depending on proximity of social infrastructure or recreation areas to rail line <b>Sensitivity:</b> Low to moderate depending on the value users attach to the areas
Amenity – acoustic, visual, odour, microclimate (Section 7.7.2)	The presence of temporary workforce accommodation facilities in the towns of Gilgandra and Baradine could lead to an increase in noise and visual changes for residents or users of social infrastructure facilities located nearby. This includes Baradine Showground, and Jack Towney Hostel located in Gilgandra.	Way of life Community Surroundings	<b>Duration:</b> Short term as facilities would be in place for up to four years during the construction period <b>Extent:</b> Low to moderate, depending on proximity of community members to facilities <b>Severity:</b> Low to moderate, depending on proximity of community members to facilities <b>Sensitivity:</b> Low to high depending on the vulnerability of community members
Access – to property, utilities and public transport, road and rail (Sections 7.3.2 and 7.6)	Construction and operation of the proposal would require land including private land, which would require acquisition of a number of properties. Outcomes from the Community Consultative Committee (CCC) meetings and consultation undertaken by ARTC indicate high levels of concern from many property owners and communities along the proposal area regarding severance of properties, affects on access within and between properties, and resulting impacts to agricultural activities. The uncertainty about which properties would be impacted, how they would be impacted, changes to property access, and the compensation process, has led to stress and anxiety for property owners.	Access Personal and property rights Health and wellbeing Way of life Fears and aspirations Decision-making systems	<b>Duration:</b> Long term due to length of time to determine the proposed alignment, confirm the proposal site and therefore properties affected, and permanent changes for those properties impacted by the new rail line <b>Extent:</b> Moderate to high as experienced across local study area and property owners within or near the proposal study area <b>Severity:</b> Moderate to high depending on impacts to each property <b>Sensitivity:</b> Moderate to high for most property owners

Environmental matters as per SIA Guideline	Description of issues and justification	Social impact areas addressed as per SIA Guideline	Preliminary assessment
Access – to property, utilities and public transport, road and rail (Section 7.6)	Construction of the proposal would require the delivery of goods and services at construction sites. It is expected that this would increase construction-related traffic on some roads along the proposal area. It could also result in temporary changes to local roads which may require road users to alter their access routes and use detours. Increased heavy vehicles on local roads could also lead to perceptions of decreased safety.	Access Fears and aspirations Way of life	<b>Duration:</b> Temporary during construction <b>Extent:</b> Low to moderate as would affect motorists using roads <b>Severity:</b> Low as most roads are likely to already be used by heavy vehicles <b>Sensitivity:</b> Low to moderate as most people would be used to heavy vehicles using roads in the study area
Access – to property, utilities and public transport, road and rail (Sections 8.3 and 8.6)	Operation of the proposal would result in permanent closure of a limited number of public roads, which may change some access routes used by the community members resulting in increased travel times.	Access Way of life	<b>Duration:</b> Permanent <b>Extent:</b> Low as only a small number of local roads expected to be closed and only some community members using roads <b>Severity:</b> Low due to small number of local roads to be closed <b>Sensitivity:</b> Low as there would be alternate routes available
Built environment – public domain, public infrastructure, other built assets (Section 7.6)	Based on the proposed construction activities and the proposal description, elements of the built environment that have the potential to be impacted include public roads due to temporary closures during construction.	Surroundings	<b>Duration:</b> Temporary during construction <b>Extent:</b> Low as road closures would only occur at times during construction period <b>Severity:</b> Low due to temporary nature of impact <b>Sensitivity:</b> Low as would be managed through standard construction management measures
Heritage – natural, cultural, Aboriginal cultural, built (Sections 7.5.5)	The proposal site traverses the Pilliga forests and places that have natural and cultural significance valued by some communities. Construction activities have the potential to affect Aboriginal heritage, and may affect places of historical significance, due to land acquisition, amenity and access changes.	Culture Surroundings	<b>Duration:</b> Temporary or permanent, depending on the construction activities and places or items that are impacted <b>Extent:</b> Low to high depending on the construction activities and places or items that are impacted <b>Severity:</b> Low to high depending on construction activities and places or items that are impacted <b>Sensitivity:</b> Community members who place value on these places or items are likely to have moderate to high sensitivity

Environmental matters as per SIA Guideline	Description of issues and justification	Social impact areas addressed as per SIA Guideline	Preliminary assessment
Community – health, safety, services and facilities, cohesion, capital, resilience, housing (Section 7.1.2, 7.4, 7.5, 7.7.3)	Based on the proposal description, five temporary workforce accommodation facilities are proposed that could accommodate up to 2,000 workers during peak periods over the four year construction period. There is potential for the non-resident construction workforce to increase demand on services and facilities in host towns, and lead to perceptions about social cohesion and safety. CCC meetings indicate there is support from councils to host the facilities in towns to avail of the economic benefits for the towns.	Way of life Community Access to infrastructure and services Surroundings	<b>Duration:</b> Temporary during construction <b>Extent:</b> Low to moderate depending on the level of interaction that workers have with towns and capacity of services and facilities <b>Severity:</b> Low to moderate depending on the level of interaction that workers have with towns and capacity of services and facilities <b>Sensitivity:</b> Low as communities are supportive of facilities being located in towns
Community – health, safety, services and facilities, cohesion, capital, resilience, housing (Section 7.4)	The proposed temporary workforce accommodation would be sufficient for the entire construction workforce of up to 2,000 workers. However there may be some specialist contractors who may choose to stay in local tourist accommodation at times, which could increase demand for tourist accommodation in some towns. Some workers may also choose to rent housing.	Community Access to infrastructure and services	<b>Duration:</b> Temporary during construction <b>Extent:</b> Low as only small number of workers may occasionally stay in local tourist accommodation <b>Severity:</b> Low as not expected to occur frequently <b>Sensitivity:</b> Low as tourist facilities are likely to have capacity if required
Economic – natural resource use, livelihood, opportunity cost (Section 7.2)	Outcomes from CCC meetings, and consultations with Councils and chambers of commerce, indicate the employment and training opportunities provided during construction of the proposal are viewed as significant benefits for local communities. Construction of the proposal would require up to 2,000 workers at peak times.  CCC meetings, and consultations with councils and chambers of commerce, indicate there are many farmers with relevant skills who could work on the construction program, particularly as they would be looking for additional income due to the drought conditions in the region.	Way of life	<b>Duration:</b> Temporary during construction <b>Extent:</b> Moderate to high given the number of workers required for the proposal <b>Severity:</b> Moderate due to the number of workers required <b>Sensitivity:</b> Moderate given the expectations for local employment opportunities and training and skills development

Environmental matters as per SIA Guideline	Description of issues and justification	Social impact areas addressed as per SIA Guideline	Preliminary assessment
Economic – natural resource use, livelihood, opportunity cost (Section 7.1)	CCC meetings, and consultations with councils and chambers of commerce, indicate expectation that the construction program provides significant procurement opportunities for local businesses.	Way of life	<p><b>Duration:</b> Temporary during construction</p> <p><b>Extent:</b> Moderate to high given the scale of the construction program</p> <p><b>Severity:</b> Low to moderate depending on the number of local businesses that gain opportunities on the proposal</p> <p><b>Sensitivity:</b> Moderate to high given the expectations from local stakeholders about local procurement</p>
Economic – natural resource use, livelihood, opportunity cost (Section 7.3 and 8.3)	There is concern about construction and operation of the proposal and how it would impact agricultural properties and businesses, and therefore affect livelihoods.	Personal and property rights Way of life	<p><b>Duration:</b> Long term given the length of time in determining the proposal area, and permanent impacts to properties during operation</p> <p><b>Extent:</b> Moderate to high as experienced across local study area and property owners within or near the proposal study area</p> <p><b>Severity:</b> Moderate to high depending on impacts to each property and business</p> <p><b>Sensitivity:</b> Moderate to high for most property owners and businesses</p>
Economic – natural resource use, livelihood, opportunity cost (Section 8.1)	Based on the project description it is anticipated that operation of the proposal would have the potential for regional economic benefits due to increased freight rail capacity and supply chain efficiencies.	Surroundings	<p><b>Duration:</b> Long term as would occur during operation</p> <p><b>Extent:</b> Moderate as would benefit regional industry</p> <p><b>Severity:</b> Low to moderate as would benefit regional industry</p> <p><b>Sensitivity:</b> Low to moderate depending on access to freight network</p>

Environmental matters as per SIA Guideline	Description of issues and justification	Social impact areas addressed as per SIA Guideline	Preliminary assessment
Air – particulate matter, gases, atmospheric emissions (Section 7.5.2)	Air quality assessment shows that construction would generate dust which could affect the amenity of community members in close proximity to the proposal.	Surroundings Way of life Health and wellbeing	<p><b>Duration:</b> Temporary during construction or intermittent during operation depending on when trains are travelling</p> <p><b>Extent:</b> Low as would only affect community members in close proximity</p> <p><b>Severity:</b> Low as construction dust would be managed by typical construction mitigation measures and operational dust would only affect community members in close proximity</p> <p><b>Sensitivity:</b> Low to moderate depending on sensitivity of community members to dust</p>
Biodiversity	The proposal would require clearing of native vegetation and habitat for some threatened species which is likely to be a concern for some stakeholders. However this has not been raised as a general community concern to date therefore impacts to community values associated with biodiversity are not assessed in this study. The Biodiversity Development Assessment Report assesses impacts on biodiversity and recommends suitable mitigation measures.	Surroundings	<p><b>Duration:</b> Short term during construction</p> <p><b>Extent:</b> Low to moderate depending on extent of habitat clearing</p> <p><b>Severity:</b> Moderate for communities who are sensitive to these impacts and low for general community</p> <p><b>Sensitivity:</b> Moderate to low depending on stakeholder</p>
Land	Land requirements for the proposal and changes to land use is discussed above in this table and is also discussed in detail in the Land Use and Agriculture Assessment.	Surroundings	Not applicable
Water (Section 7.3)	CCC meetings indicate there is some concern about changes to water use during construction and local flooding conditions due to design of proposal. Given the study area has been in prolonged drought, this is likely to be a concern for some community members. A specialist study has been undertaken to assess flooding and ground water impacts.	Surroundings	<p><b>Duration:</b> Short term during construction or long term regarding flooding</p> <p><b>Extent:</b> Moderate given size of study area and flood catchments</p> <p><b>Severity:</b> Low given construction approach to use bore water and flooding study found there would be no significant impact on flooding conditions</p> <p><b>Sensitivity:</b> Moderate given area has been in prolonged drought and dependency of farmers on water</p>



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## 4.2 Focus of assessment

Following the scoping of potential issues described in Table 4.1, the potential social impacts have been grouped and investigated as summarised in Table 4.2

**Table 4.2 Social impact areas of investigation and focus of assessment**

Potential social impact area	Focus of assessment
Industry and business	<ul style="list-style-type: none"> <li>Regional industries and available businesses in the local and regional study areas</li> <li>Changes to industries in the regional study area during construction and operation of the proposal</li> <li>Opportunities for and impacts to local businesses as a result of construction and operation of the proposal</li> </ul>
Employment, workforce and training	<ul style="list-style-type: none"> <li>Education and skills base of existing local population</li> <li>Availability of training programs in the regional study area</li> <li>Assessment of potential employment and training opportunities for local and regional workforce based on indicative jobs available during construction and operation of the proposal</li> </ul>
Property and landholder impacts	<ul style="list-style-type: none"> <li>Overview of land use and properties in the local study area</li> <li>Impacts to landholders resulting from proposal land requirements during pre-construction, construction and operation of the proposal, including changes to way of life and wellbeing</li> </ul>
Housing and accommodation	<ul style="list-style-type: none"> <li>Overview of housing affordability and availability of accommodation in the regional and local study area</li> <li>Effects on local housing and accommodation availability and affordability resulting from a non-resident construction workforce</li> </ul>
Local amenity, community values and wellbeing	<ul style="list-style-type: none"> <li>Values of communities living in the local and regional study areas</li> <li>Availability of wellbeing support services and health facilities in the local and regional study areas</li> <li>Changes to local amenity resulting from construction and operation of the proposal</li> <li>Effects on community wellbeing as a result of the proposal</li> <li>Effects on local values associated with wellbeing, safety and heritage as a result of the proposal</li> </ul>
Access and connectivity	<ul style="list-style-type: none"> <li>Overview of access and connectivity in the regional study area including roads and public transport</li> <li>Changes to local access and connectivity due to construction and operation of the proposal</li> </ul>
Impacts on social infrastructure	<ul style="list-style-type: none"> <li>Overview of social and recreation infrastructure available in the local and regional study area</li> <li>Impacts to social and recreation infrastructure in the local study area as a result of construction and operation of the proposal</li> </ul>

### 4.3 Social area of influence

The social area of influence is based on those communities that have potential to experience changes to social conditions due to the location of the proposal or proposal infrastructure, construction activities, and/or changes to local movement patterns for residents, workers and visitors.

Identification of the social area of influence has also considered areas that may be affected by noise, dust and visual changes, areas that may experience land use changes, and areas that may potentially supply goods and services and labour to the proposal.

The social area of influence of the proposal includes a local study area and a regional study area.

#### 4.3.1 Local study area

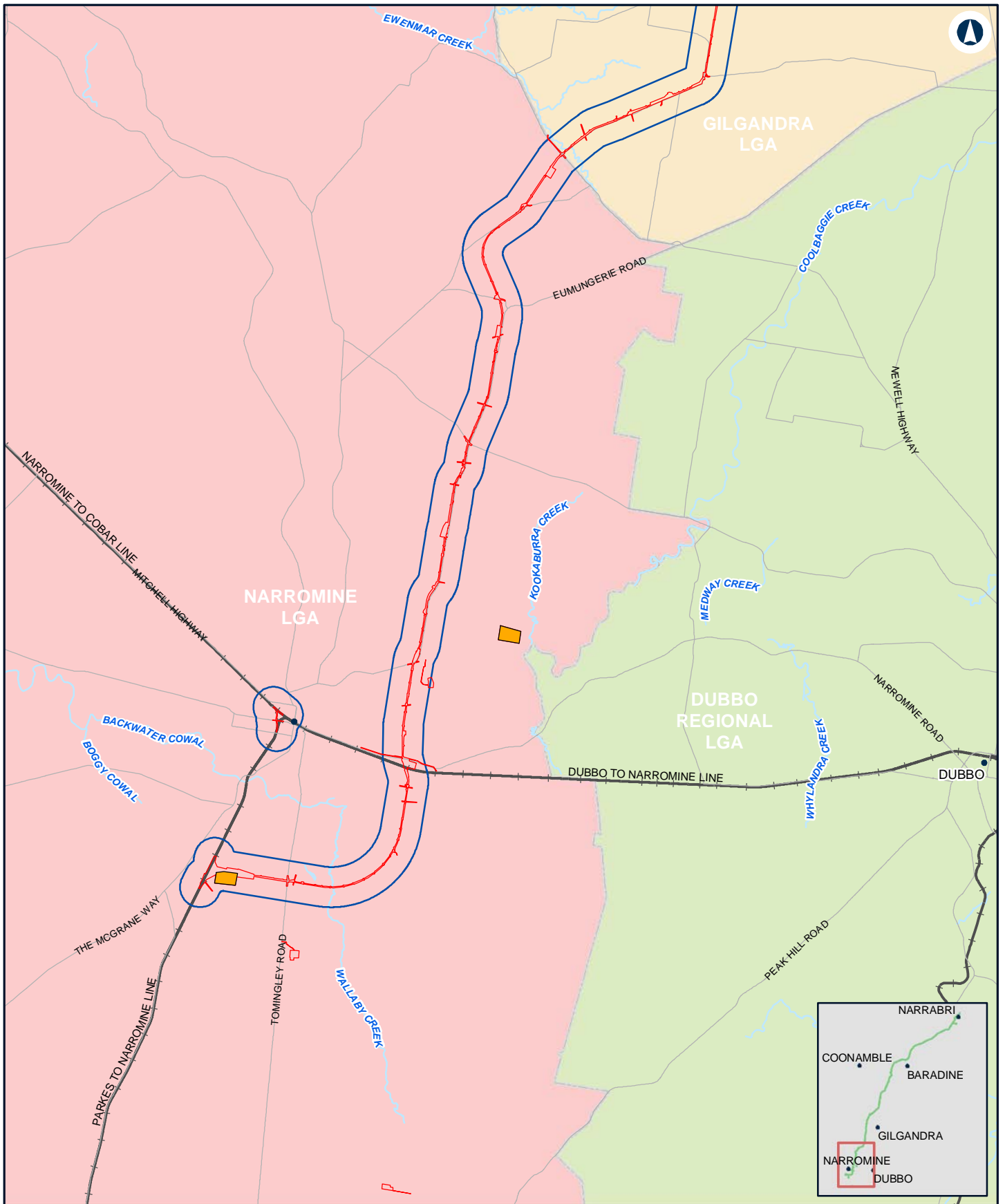
The local study area encompasses the proposal site and about one kilometre of the surrounding area either side of the proposal site. This one kilometre buffer is considered appropriate for the identification and assessment of social impacts, as it aligns with the areas with the potential to be affected by land and amenity related changes due to the proposal. In addition to the one kilometre buffer the local study area also includes the towns and communities nearest to the proposal site and therefore most likely to experience social effects as a result of the proposal.

An overview of the towns located close to the proposal and would therefore experience social effects is presented in Table 4.3 and location of these towns in relation to the proposal is shown in Figure 4.1.

**Table 4.3 Towns closest to the proposal**

Name of town/ locality	Description	Proximity to proposal
Narromine	The town of Narromine is the main town in Narromine LGA. Narromine Urban Centre and Locality (UCL) had a population of 3,528 people in 2016, which was 54.7 per cent of the LGA population (6,444 people). Narromine town is located 43.7 kilometres west of Dubbo which is a main service hub for the region.	<p>The town of Narromine is located at the southern end of the proposal site and east of the proposal site. The proposal site starts about eight kilometres south of the central business district, crosses Tomingley Road then curves north and crosses the Mitchell Highway about 5.75 kilometres east of the central business district. Two potential sites for temporary workforce accommodation facilities are proposed located outside of the town:</p> <ul style="list-style-type: none"><li>• Narromine South – located in a multi-function compound about eight kilometres south of Narromine.</li><li>• Narromine North – located on Euromedah Road about ten kilometres north-east of Narromine.</li></ul> <p>If both sites are selected, they would each have capacity for up to 250 workers. However if only one site is selected, it would have capacity for up to 500 workers.</p>

Name of town/ locality	Description	Proximity to proposal
Gilgandra	<p>The town of Gilgandra is the main town of Gilgandra LGA. Gilgandra UCL had a population of 2,595 people in 2016, which was 61.3 per cent of the LGA population (4,236 people). Gilgandra town is located 67.5 kilometres north of Dubbo.</p>	<p>The town of Gilgandra is located to the east of the proposal site. The proposal crosses the Oxley Highway about 17 kilometres west of the central business district.</p> <p>There would be a temporary workforce accommodation facility located on the north-western edge of Gilgandra on Federation Street, with capacity for up to 500 workers.</p>
Curban	<p>Curban is a suburb of Gilgandra LGA. In 2016 it had a population of 131 people which was three per cent of the LGA population (4,236 people). Curban is located 23.2 kilometres north west of Gilgandra town.</p>	<p>The proposal site would connect to the existing Dubbo to Coonamble rail line at Curban and continue north crossing the Castlereagh Highway and running parallel to National Park Road. There would be a multi-function compound located north of the Castlereagh Highway crossing on the eastern side of the proposal, about one kilometre west of the Curban Community Hall.</p>
Baradine	<p>The town of Baradine is located in Warrumbungle LGA. In 2016 Baradine UCL had a population of 626 people which was 6.7 per cent of the LGA population (9,384 people). Baradine town is located 46 kilometres north west of Coonabarabran which is the main town in the LGA.</p>	<p>The town of Baradine is located south east of the proposal site. The proposal crosses Gwabegar Road about 8.8 kilometres north-west of Baradine's town centre.</p> <p>A temporary workforce accommodation facility is proposed on the western edge of town on Lachlan Street within Baradine Showground. It will have capacity for up to 500 workers.</p>
Narrabri	<p>Narrabri is the main town of Narrabri LGA. In 2016 Narrabri UCL had a population of 5,903 people which was 45.1 per cent of the LGA population (13,084 people). Narrabri is located 173 kilometres north west of Tamworth which is a main service hub for the region.</p>	<p>Narrabri is located at the northern end of the proposal site. The proposal curves around the western edge of the town crossing the Kamilaroi Highway about 2.4 kilometres from Narrabri's central business district then travelling north, parallel to the Newell Highway.</p> <p>There will be a temporary workforce accommodation facility located in a multi-function compound situated where the proposal connects with the Narrabri to Walgett Line, about four kilometres south west of the Narrabri central business district. It will have capacity for up to up to 500 workers.</p>



## NARROMINE TO NARRABRI

## Social Assessment local study area

Figure 4.1 a

0 3.5 7  
Km

Coordinate System: GDA 1994 MGA Zone 55

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Date: 23/06/2020  
Author: JacobsGHD

Paper: A4  
Scale: 1:260,000

Data Sources: Basemap layers: NSWSS; Footprints, sensitive receivers: GHDJACOBS

### LEGEND

- The proposal site
- 1km catchment
- Temporary workforce accommodation

**INLAND RAIL** **ARTC**

The Australian Government is delivering Inland Rail through the Australian Rail Track Corporation (ARTC), in partnership with the private sector.





## NARROMINE TO NARRABRI

## Social Assessment local study area

Figure 4.1 b

0 3.5 7  
Km

Coordinate System: GDA 1994 MGA Zone 55

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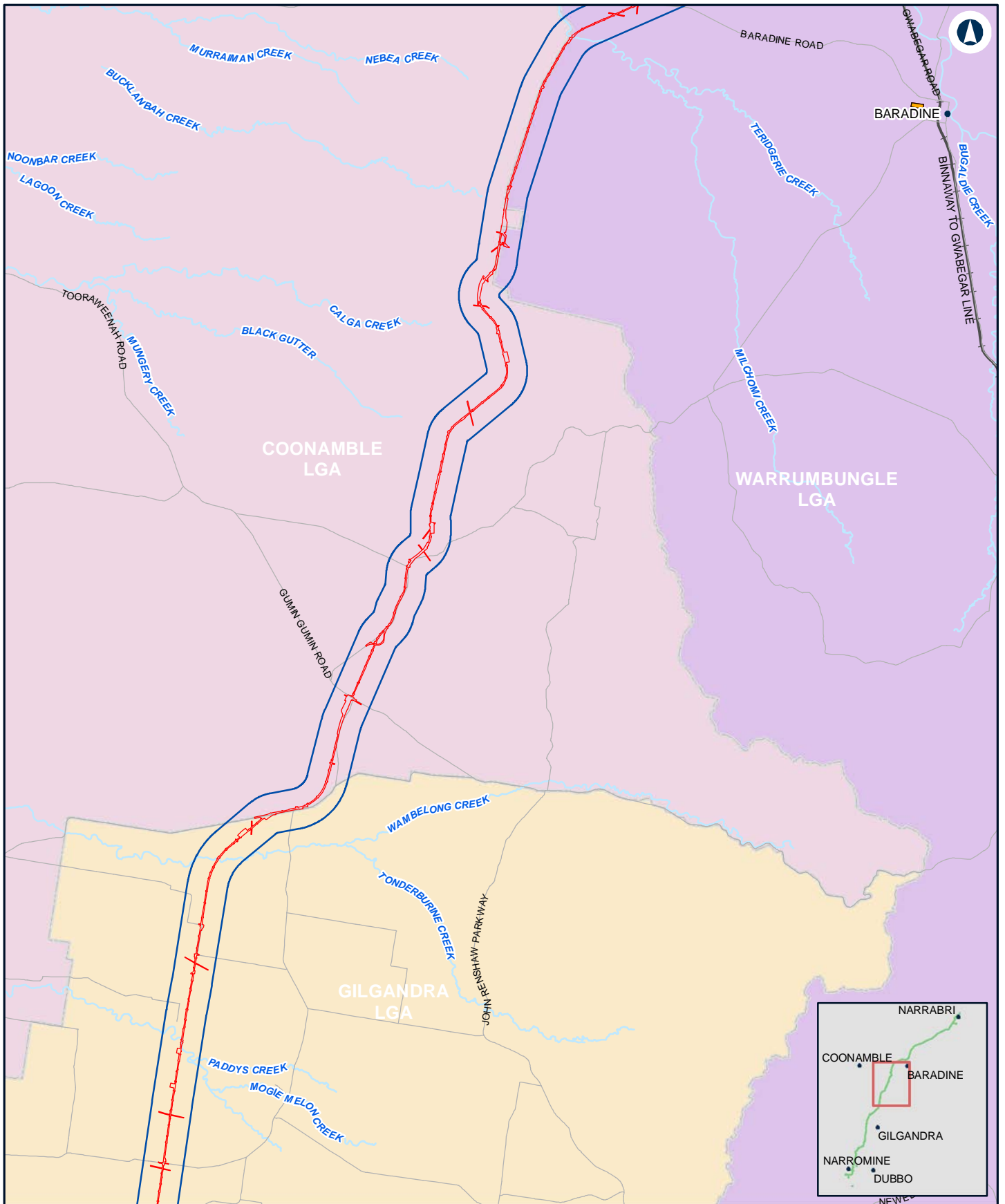
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### LEGEND

- The proposal site
- 1km catchment
- Temporary workforce accommodation

**INLAND RAIL** **ARTC**

The Australian Government is delivering Inland Rail through the Australian Rail Track Corporation (ARTC), in partnership with the private sector.



## NARROMINE TO NARRABRI

## Social Assessment local study area

Figure 4.1 c

0 3.5 7  
Km

Coordinate System: GDA 1994 MGA Zone 55

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Author: JacobsGHD

Scale: 1:260,000

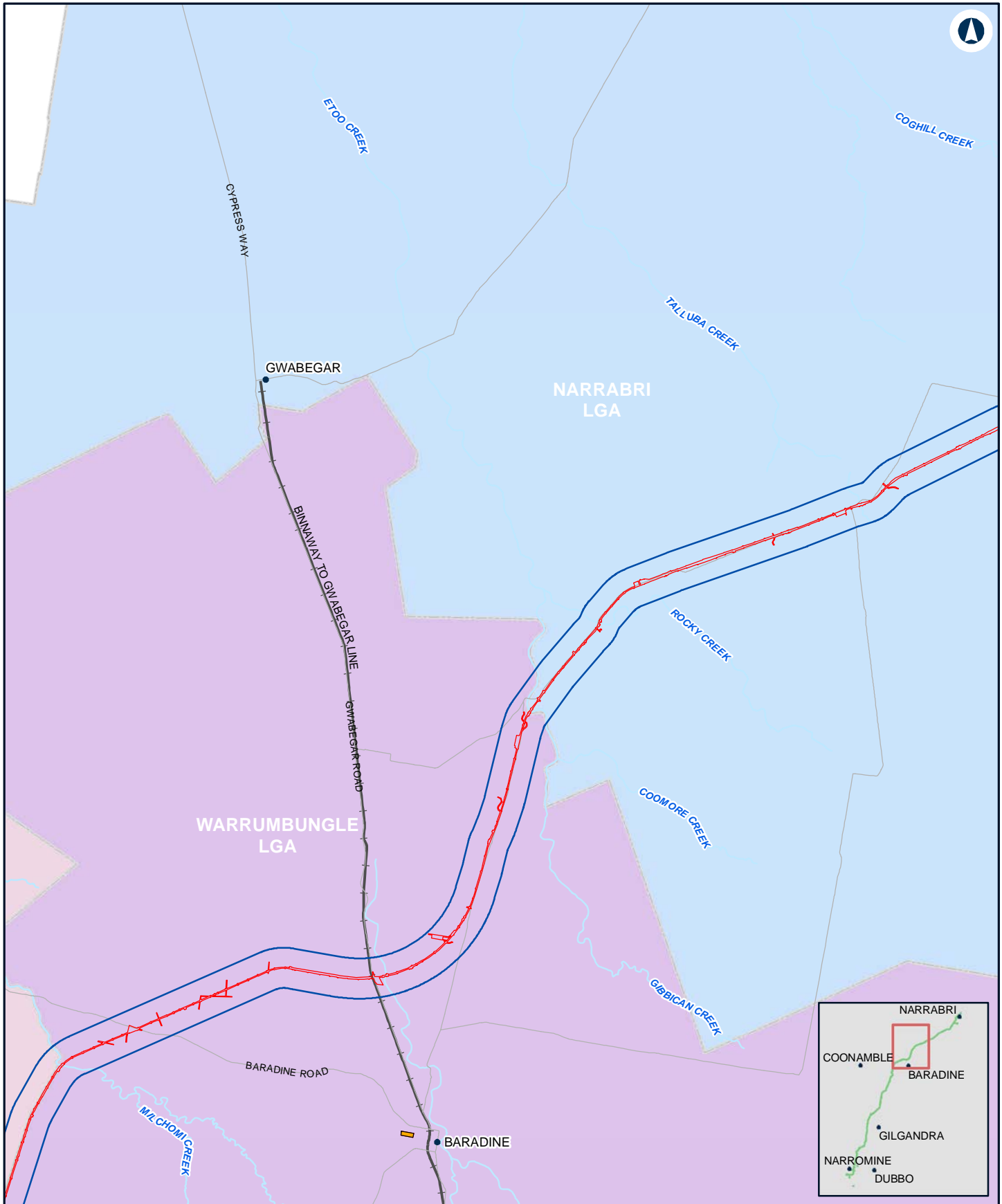
Data Sources: Basemap layers: NSWSS; Footprints, sensitive receivers: GHDJACOBS

### LEGEND

- The proposal site
- 1km catchment
- Temporary workforce accommodation

**INLAND RAIL** **ARTC**

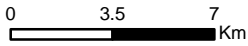
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**NARROMINE TO NARRABRI**

**Social Assessment local study area**

Figure 4.1 d



**LEGEND**

- The proposal site
- 1km catchment
- Temporary workforce accomodation

Coordinate System: GDA 1994 MGA Zone 55

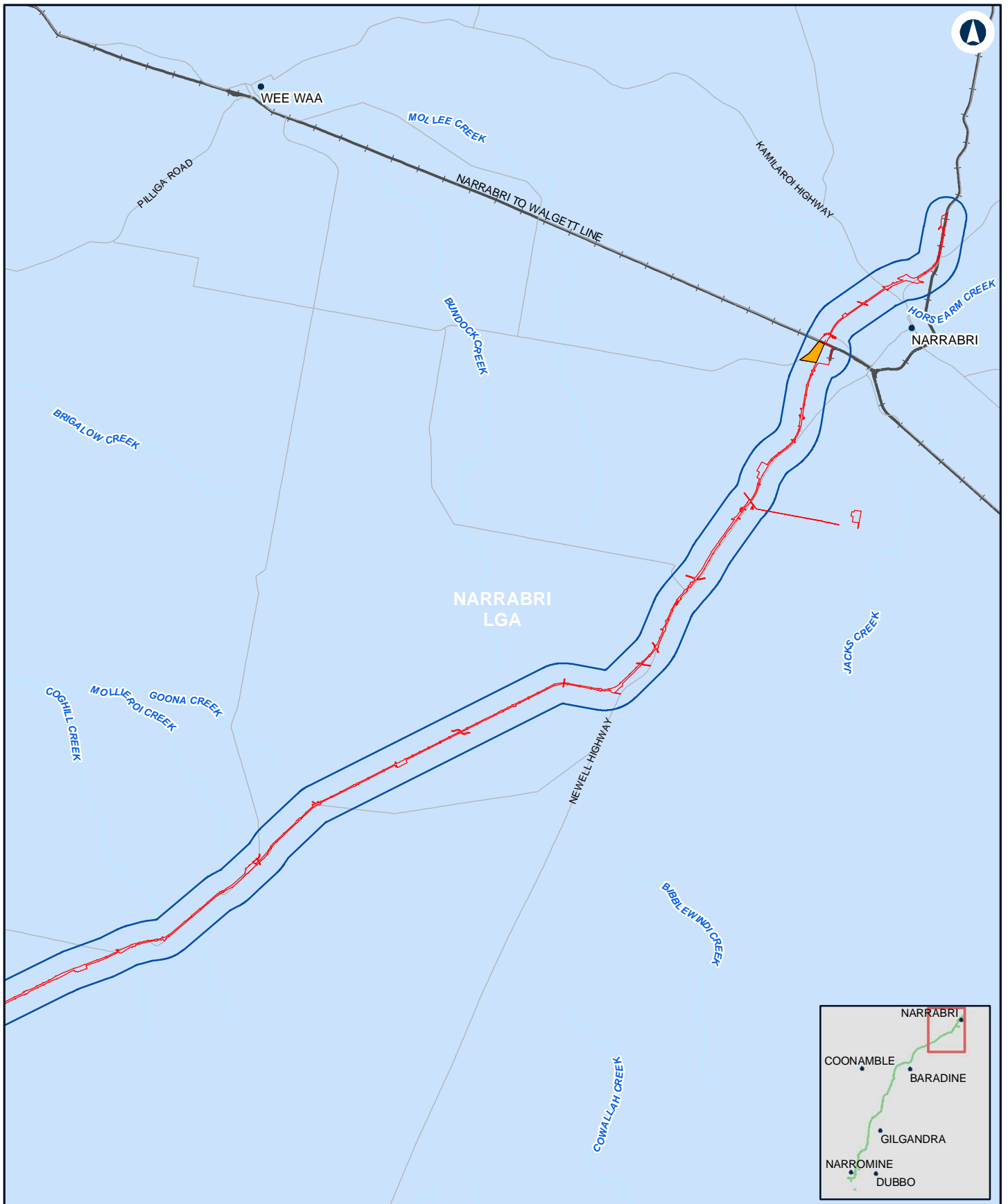
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## NARROMINE TO NARRABRI

## Social Assessment local study area

Figure 4.1 e

0 3.5 7  
Km

Coordinate System: GDA 1994 MGA Zone 55

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### LEGEND

- The proposal site
- 1km catchment
- Temporary workforce accommodation

**INLAND RAIL** **ARTC**

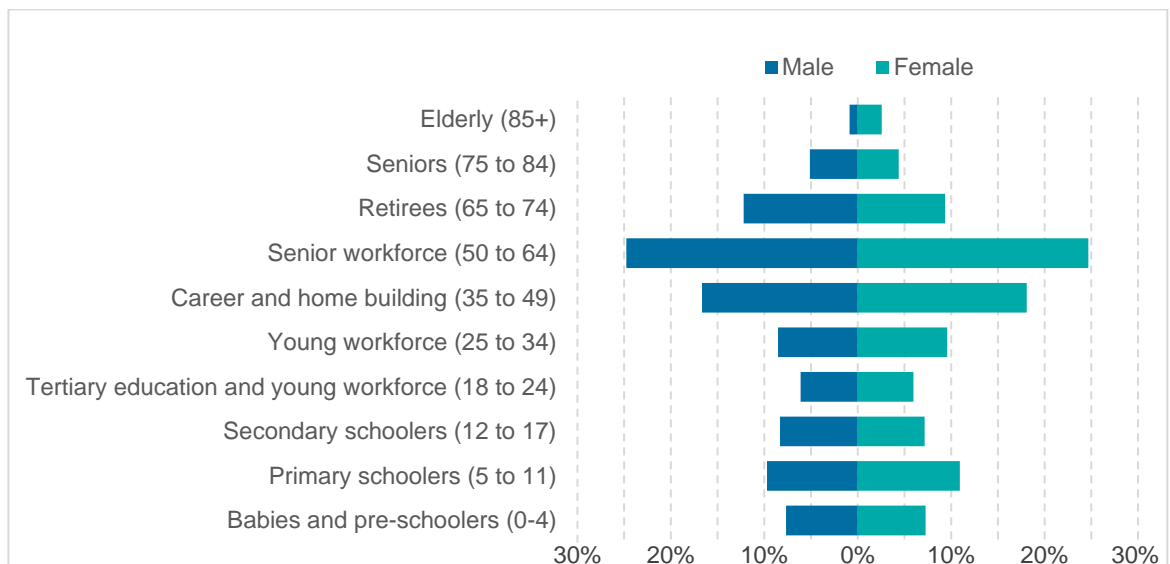
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### Overview of population living along proposal site

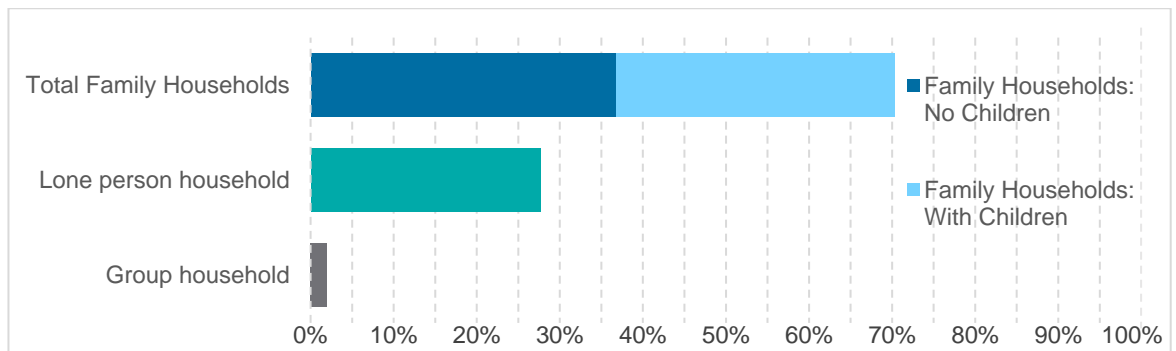
For the purpose of understanding the population that may be affected by construction and operation of the proposal, the local study area also considers the Statistical Area Level 1 (SA1) areas that are located along the proposal site, as SA1s are generally the smallest unit for the release of Census data. Figure 4.5 shows the location of these SA1s, and as demonstrated in the figure, the footprint of SA1s intersected by the proposal site often extends further than the one kilometre boundary identified for the local study area. However this catchment has been considered appropriate to understand population characteristics which may be relevant to this Social Assessment.

In total, the aggregate population of these SA1s in 2016 was 9,005 people. Key demographic characteristics of the area are summarised as follows:

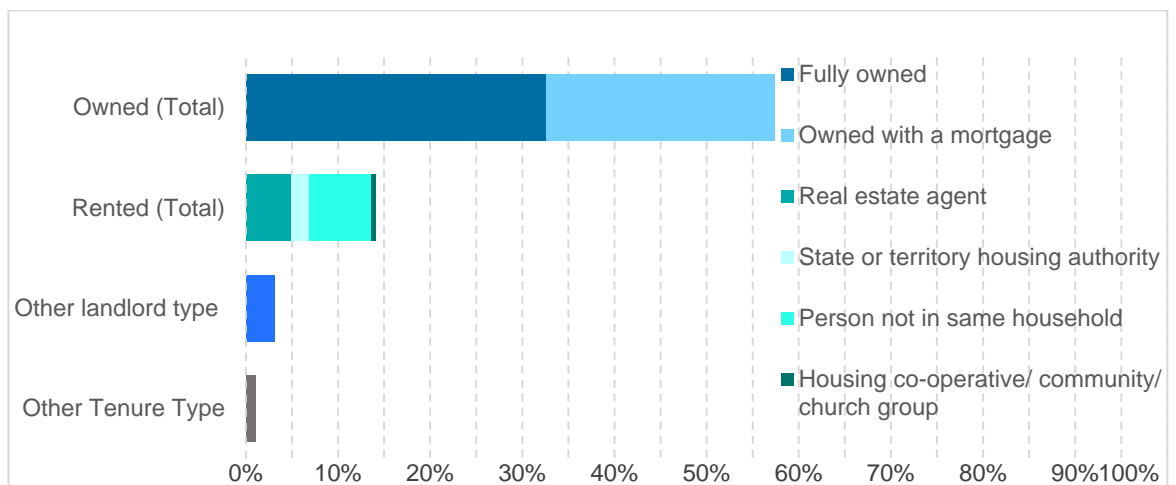
- 12.7 per cent of residents or 1,049 people identified as Aboriginal and Torres Strait Islander, which is high compared to NSW (2.9 per cent).
- The area has an older population, with a median age of 43 years and around 18.6 per cent of the population aged 65 years or older (compared to 16.3 per cent for NSW).
- The population is relatively evenly split between males and females across all age groups (Figure 4.2).
- Almost three quarters of households are family households, with a fairly even split between families with and without children (Figure 4.3). Over a quarter of householders are lone person households.
- Less than 15 per cent of dwellings in the area are rented, with 57.4 per cent of the dwellings owned by the occupier, and over half of those are fully owned without a mortgage (Figure 4.4). Interestingly, a significant proportion of those dwellings that are rented the landlord is a person not in the same household which could indicate close community networks.



**Figure 4.2 Age and sex profile for SA1s close to proposal**

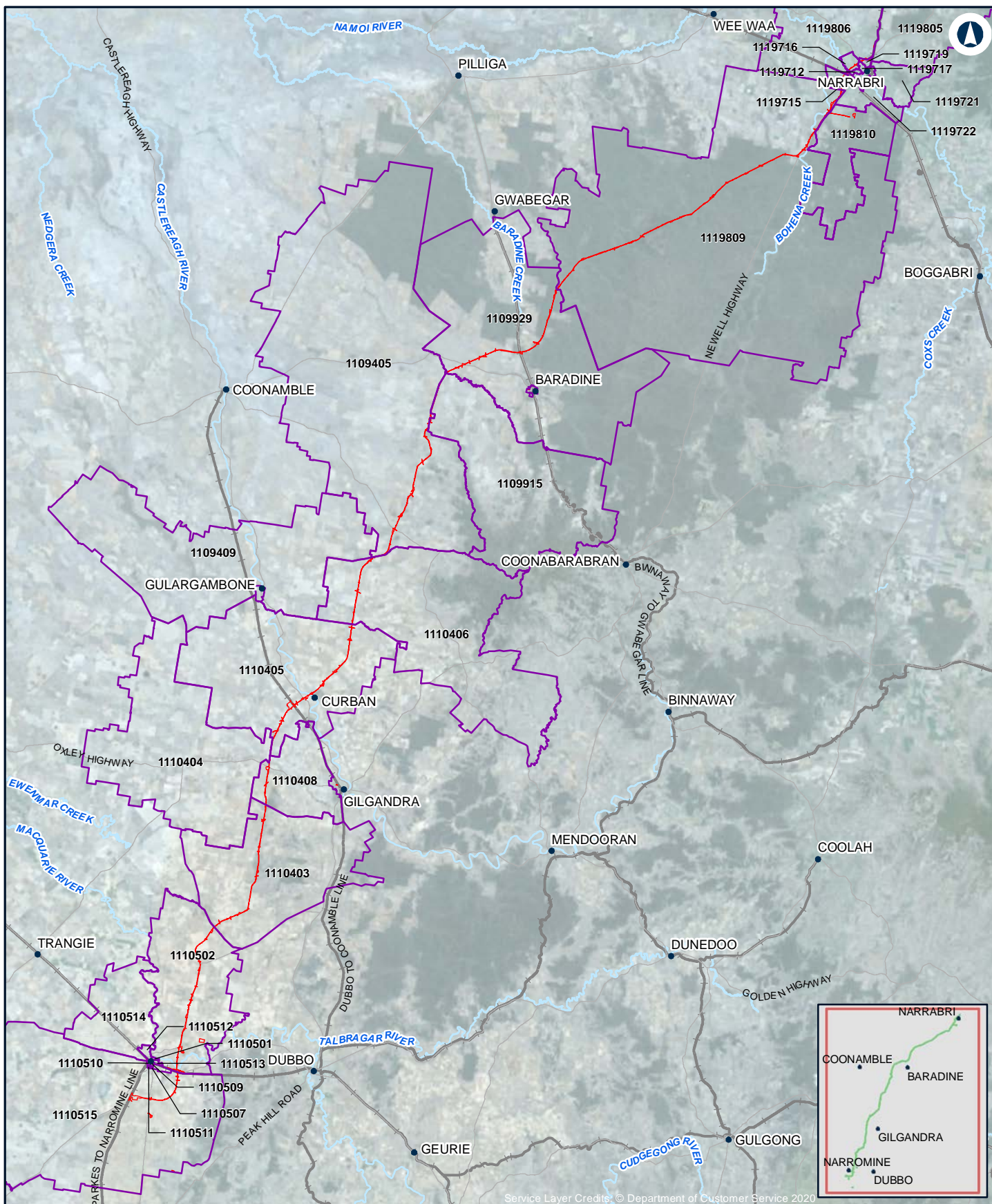


**Figure 4.3 Household breakdown for SA1s close to proposal**



**Figure 4.4 Tenure type for SA1s close to proposal**





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## NARROMINE TO NARRABRI

Statistical area 1 boundaries

Figure 4.5

0 10 20  
Km

Coordinate System: GDA 1994 MGA Zone 55

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Paper: A4

Author: JacobsGHD

Scale: 1:1,100,000

Data Sources: Basemap layers, SA1 boundaries: ABS; Footprints: GHDJACOBS

### LEGEND

- The proposal site
- SA1 boundaries

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### **4.3.2 Regional study area**

The regional study area for this Social Assessment includes the LGAs intersected by the proposal, namely Narramine, Gilgandra, Coonamble, Warrumbungle and Narrabri as they would have the most potential to be affected by construction and operation of the proposal. The regional study area also includes Dubbo Regional LGA<sup>2</sup> as Dubbo is a major regional centre located close to the proposal site and provides access to employment and services for communities along the proposal site.

LGAs are important within the proposal's social area of influence, because this forms the administrative area within which the proposal is located and in most cases local plans, policies and service provision are organised by LGAs. Therefore to gain a meaningful understanding of the study area, this Social Assessment provides an overview of the demographic characteristics, community infrastructure and facilities, community values, and regional access and connectivity, including travel behaviour for the regional study area.

For the purpose of employment and economic data analysis, the regional study area has also been identified with consideration of the following labour market region boundaries of the Australian Statistical Geography Standard:

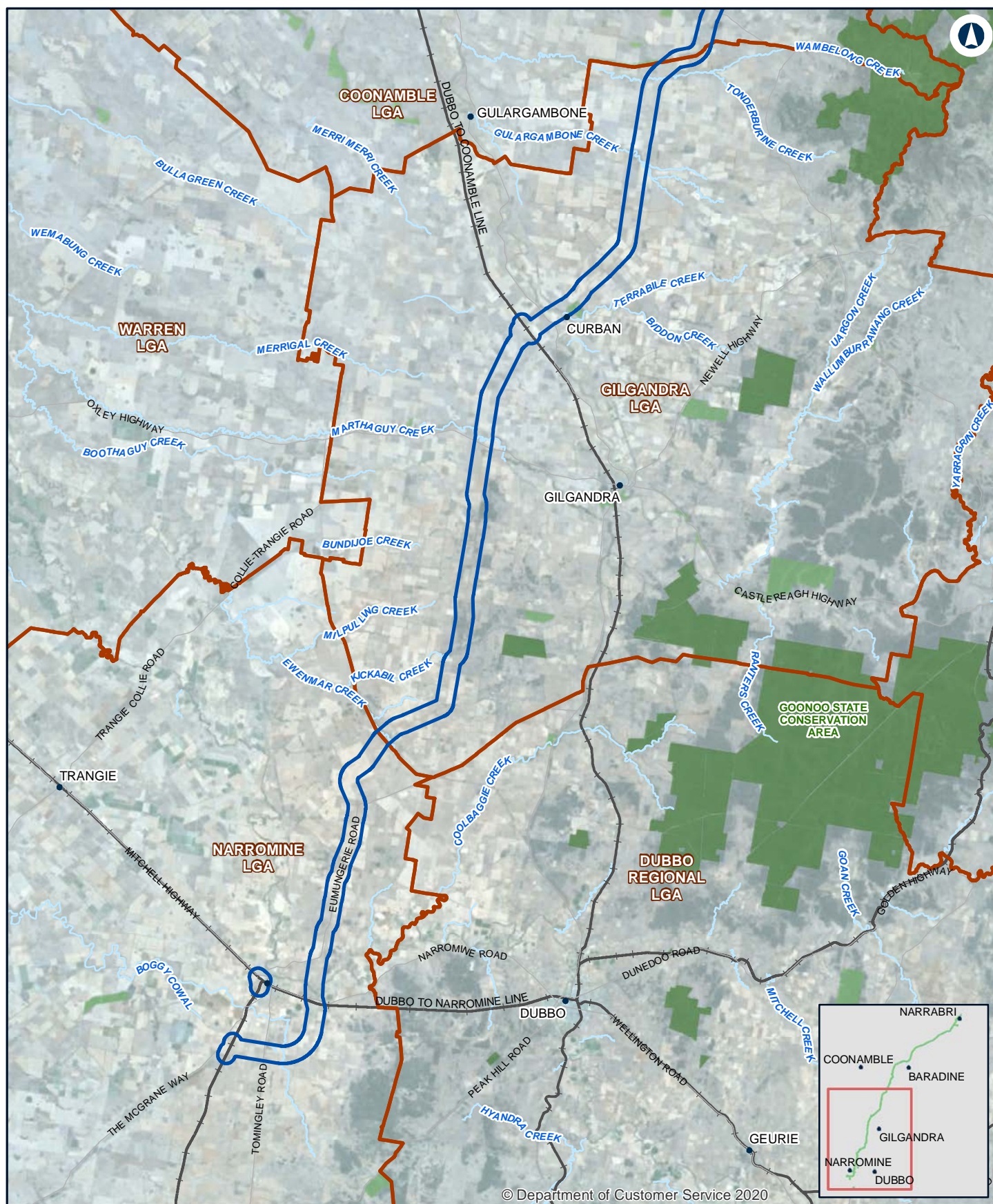
- Far West and Orana Region
- New England North West Region.

These regions also align with the planning regions discussed in section 2.3.3.

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<sup>2</sup> The LGA was formed in May 2016 through a merger of the City of Dubbo and Wellington Council. Originally named Western Plains Regional Council, the name was changed to Dubbo Regional Council in September 2016.





## NARROMINE TO NARRABRI

## Social Assessment regional study area

Figure 4.6a



Coordinate System: GDA 1994 MGA Zone 55

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Date: 23/06/2020

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Paper: A4

Date: 23/06/2020  
Author: JacobsGHD

Paper: A4  
Scale: 1:600,000

Data Sources: Basemap layers: NSWSS; Study area: GHDJACOBS

### LEGEND

 1km catchment



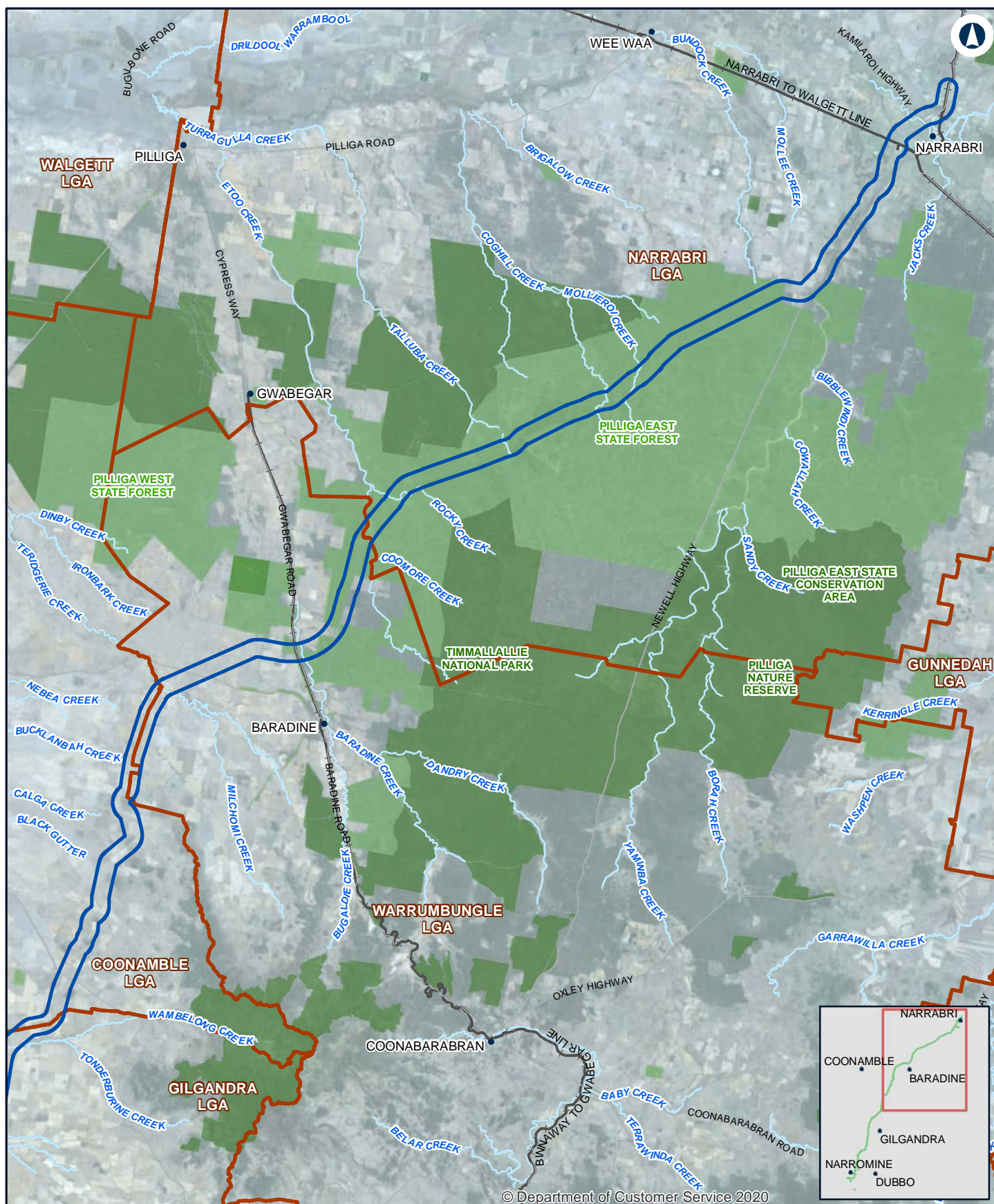
LGA boundary

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## NARROMINE TO NARRABRI

Social Assessment regional study area

Figure 4.6b

0 8 16  
Km

Coordinate System: GDA 1994 MGA Zone 55

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Date: 23/06/2020

Paper: A4

Author: JacobsGHD

Scale: 1:600,000

Data Sources: Basemap layers: NSWSS; Study area: GHDJACOBS

### LEGEND

- 1km catchment
- LGA boundary

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# 5 Stakeholder and community engagement

This section presents a summary of issues relevant to this Social Assessment raised by stakeholders and community members during consultations undertaken by ARTC and for the Social Assessment.

## 5.1 ARTC consultation

ARTC has been undertaking a comprehensive engagement program with community and stakeholders throughout the proposal planning and design process. Chapter 4 and Appendix C of the EIS provides details of these activities, stakeholders engaged and issues raised.

A summary of where issues relevant to this Social Assessment have been addressed in the EIS and in this report is provided in Table 5.1.

**Table 5.1 Relevant issues raised through ARTC consultation for the EIS**

Issue category	Issue raised	Where addressed in the EIS	Where addressed in this Social Assessment
Project design and features	Who has been involved in consultation for this project?	Chapter A4	Section 5.2
	Level crossing design and safety	Chapter A7 3.7	Section 8
	Cumulative impacts with surrounding projects	Chapter D1	Section 9
Construction	Where will accommodation for construction workers be provided	Chapter A8 9.4 Chapter C2	Section 7.4
Operation of the proposal	How many trains per day?	Chapter A7 4.1	Section 8.5.1
Property acquisition and compensation	What happens if the proposal has an impact on the operations of a property and/or business?	Chapter B12	Sections 7.3 and 8.3
Traffic, transport and access	Access for impacted properties	Chapter B11 and B12	Sections 7.3, 7.6, 8.3 and 8.6
	Construction traffic management, including access to the rail corridor	Chapter B11	Section 7.6
Noise	Construction noise and vibration	Chapter B9	Section 7.5.1
	Noise and vibration during operation	Chapter B9	Section 8.5.1
Socio-economic and business impacts	Local business and community benefits from construction of the proposal	Chapter B14	Sections 7.1.2 and 7.2
	Local business and community benefits from operation of the proposal	Chapter B14	Sections 8.1 and 8.2
	Regional benefits of the proposal	Chapter B14	Sections 7.1, 7.2 8.1, 8.2 and 8.6

Issue category	Issue raised	Where addressed in the EIS	Where addressed in this Social Assessment
Land use impacts	Impacts in the Pilliga forests	Chapter B12	Section 7.7.2
	Impacts on private infrastructure, eg dams	Chapter B12	Sections 7.3 and 8.3
	Impacts to farming operations during construction and operation	Chapter B12	Sections 7.3 and 8.3
Air quality	Construction air quality impacts	Chapter B10	Section 7.5.2
Water resources	Construction water sources	Chapter A8, B5	Section 7.3
	Impacts on private bores	Chapter B5	Section 7.3
Bushfire hazard	Access for emergency vehicles across the rail corridor	Chapter B11	Sections 7.7.3 and 8.7
Visual	Light impacts from night time train operations	Chapter B13	Section 8.5.2

## 5.2 Social Assessment consultation activities

This section presents a summary of the key social issues and opportunities identified by stakeholders consulted for the Social Assessment during 2019 and 2020. Table 5.2 presents a summary of stakeholders consulted and an overview of the consultation activities. The following sections present a summary of key issues and themes for each stakeholder group.

**Table 5.2 Summary of Social Assessment consultation activities**

Stakeholder group	Stakeholders consulted <sup>3</sup>	Overview of consultation activity
Community Consultative Committees (CCCs)	Narromine Gilgandra Narrabri	CCC meetings were attended in October 2019 to present the Social Assessment methodology, discuss potential social and economic impacts, and potential management and mitigation measures.
Local government	Coonamble Shire Council Gilgandra Shire Council Narrabri Shire Council Narromine Shire Council Warrumbungle Shire Council Dubbo Regional Council	Representatives of each council in the regional study area were consulted, including economic development, community development and planning staff. Discussions included confirming the social baseline findings, understanding potential social impacts during construction and operation, and potential mitigation strategies.

<sup>3</sup> Note that representatives from Dubbo Regional Council and Dubbo Business Chamber were included in the consultations for this Social Assessment due to the role the LGA plays in employment and service provision for communities throughout other LGAs in the study area.



Stakeholder group	Stakeholders consulted <sup>3</sup>	Overview of consultation activity
Chambers of commerce	<p>Coonamble Chamber of Commerce</p> <p>Dubbo Business Chamber</p> <p>Coonabarabran District Chamber of Commerce</p> <p>Narrabri Chamber of Commerce</p> <p>Chamber of Commerce Narromine</p> <p>Baradine Progress Association</p>	<p>Representatives of chambers of commerce in the regional study area were consulted.</p> <p>Discussions included confirming the skills and capacity of the local workforce and businesses to tap into opportunities during construction and operation, and understanding potential social and economic impacts during construction and operation.</p>
Local Aboriginal Land Councils (LALC)	<p>Narrabri</p> <p>Pilliga</p> <p>Baradine</p> <p>Weilwan</p> <p>Gilgandra</p> <p>Narromine</p> <p>Coonamble</p> <p>Dubbo</p>	<p>Representatives of LALC were consulted including CEOs, Board members and local Aboriginal community members. Discussions included confirming the skills and capacity of the local Aboriginal workforce, understanding local social issues, sensitivities and potential social impacts during construction and operation.</p> <p>Representatives of Coonabarabran LALC and Wee Waa LALC were not to be consulted in late 2019 when they were in the field. Due to social distancing restrictions in the first half of 2020, the LALCs were unable to meet in person which was their preferred method of consultation. ARTC will continue to consult with all LALCs during the detailed design phase and construction phases.</p>
Regional Emergency Management Committees (REMC)	Central West REMC	<p>Central West REMC were consulted at their meeting in December 2019 to discuss potential changes to service provision resulting from construction activities, increased demand due to the construction workforce, and approach to further consultation to inform the detailed design.</p> <p>The New England REMC meeting in December 2019 was cancelled due to bushfire emergency. ARTC will continue to consult with local and regional emergency service providers during the detailed design and construction phases.</p>

Stakeholder group	Stakeholders consulted <sup>3</sup>	Overview of consultation activity
Impacted community facilities and services	Baradine Showground, Baradine Aussie Kindies Early Learning, Gilgandra Narrabri Dirt Bike Club Jack Towney Hostel, Gilgandra <consultation pending>	<p>Representatives of community facilities that may be affected by construction or operation of the proposal were consulted. These included:</p> <ul style="list-style-type: none"> <li>Baradine Showground and Jack Towney Hostel in Gilgandra which are adjacent to proposed temporary accommodation facilities</li> <li>Aussie Kindies Early Learning, which is close to a potential location for the temporary workforce accommodation facility in Gilgandra</li> <li>Narrabri Dirt Bike Club which may be affected by the proposal's temporary and permanent land requirements.</li> </ul> <p>The purpose of these meetings was to understand the use and function of the facilities, understand their users, discuss potential impacts, and mitigation measures.</p>

As part of consultation specific to the Social Assessment, a sample of private landholders affected by the proposal was also included. Purposive sampling techniques were used to identify a representative cross-section of landholders in the study area. A face-to-face, semi-structured interview method was determined to be the most appropriate to consult with the landholders. The sampling and consultation method was informed by the already occurring landholder engagement being undertaken by ARTC. To meet the EIS timeframe these consultations were scheduled to occur in March/April 2020. However, due to the COVID-19 pandemic and associated travel and social distancing restrictions, face-to-face interviews were not possible, and telephone interviews were not considered appropriate given the sensitive nature of this consultation. Furthermore, given that an objective of the Social Assessment related landholder consultation was also to undertake site visits of the properties (where landholders would allow that) to a gain better understanding and appreciation of the baseline conditions and potential impacts, telephone interviews would not meet this objective. ARTC Inland Rail has consulted with all directly impacted landholders and relevant information from these discussions has been used to inform the Social Assessment.

### 5.2.1 Common themes and issues raised during Social Assessment consultation

The following key issues and themes were raised by stakeholder groups consulted for the Social Assessment:

- There has been frustration amongst some community members in the study area due to the uncertainty of the location of the final alignment. This is causing some affected landowners stress about potential impacts on their properties resulting from the proposal.
- All communities in the study area have been in drought which has placed increased pressure on landholders, particularly those who are dependent on their properties to provide household income and do not have access to other income sources.
- Local farmers and workers in the agricultural industry are seeking alternate income opportunities due to the prolonged drought conditions. Most have the relevant skills and machinery for construction activities; however, some may need support to gain required certifications and tickets.

- Stakeholders indicated there is general interest from the local workforce and local businesses in the region to access employment and procurement opportunities through the proposal.
- A number of stakeholder groups indicated there is concern about Inland Rail's definition of 'local content'. There is a sentiment amongst stakeholders that 'local' is defined as the whole region along the proposal site, which could mean that some LGAs or towns are likely to receive more opportunities and benefits than others during construction.
- Councils, chambers of commerce and LALCs all expressed willingness to help their communities prepare for employment and procurement opportunities to maximise benefits for local communities.
- To maximise opportunities for local communities, it will be important for Inland Rail to ensure there is early and extensive communication about available opportunities, including information about how people can access the opportunities and the required training. Most stakeholders indicated they would like to see Inland Rail have a shopfront/presence within towns along the corridor as not all people will go online to find information.

### **5.2.2 Community Consultative Committees**

The following issues and themes were raised by Community Consultative Committees consulted for the Social Assessment:

- An important consideration for the social context of this study is the prolonged drought conditions experienced in NSW. Many farmers have been significantly affected by the drought and have had low or no incomes for extended periods. This pressure has affected the resilience of many communities in the study area. The Central West region, where many of the communities in the study area are located, is one of the worst affected regions. According to WaterNSW (n.d.), without imminent inflows (water entering the river and its storages), the lack of water will continue to impact water quality and the riverine environment, and curtail agricultural production.
- Providing local employment opportunities is important, particularly given some areas have high rates of unemployment. It is also important to ensure employment opportunities are distributed across the communities in the study area. Job readiness may be an issue if local people do not have experience or skills.
- The proposal presents opportunities for young people to gain qualifications and local employment, and experience for future career pathways.
- There are many local farmers who have required skills and experience for construction activities, and in some cases have the required qualifications (eg machinery and truck tickets, construction white cards). They could gain work on the proposal, which would particularly assist those affected by drought by providing alternate income.
- Procurement opportunities for local businesses are viewed positively, however businesses will need timely information about the proposal, and some may need support to be prepared for the procurement opportunities.
- The temporary workforce and accommodation present potential opportunities not only for local businesses but also for services such as healthcare and emergency services. Some of these services are currently under resourced, there is a need to plan for the potential increase in demand during construction.

### 5.2.3 Local government

The following issues and themes were raised by local government representatives consulted for the Social Assessment:

- Some councils want to see Inland Rail's definition of 'local content' defined according to LGAs rather than the whole region along the proposal site. A number of the councils recommended dividing work packages up by LGA.
- Temporary workforce accommodation is supported by councils, particularly if there are economic benefits for local businesses. Some LGAs have existing workforce accommodation facilities that could be used once upgraded, or have identified preferred sites in their LGA. There is support for some workers using local accommodation facilities rather than all workers staying in temporary workforce accommodation to increase economic opportunities.
- Services and businesses in larger population centres (eg Dubbo, Coonabarabran and Narrabri) would have capacity to support temporary workforce accommodation.
- Local services and businesses should be used to service the temporary workforce accommodation to increase local economic benefits and sustainable employment opportunities from the proposal. Early information about procurement opportunities enable local services and businesses to prepare and coordinate additional resources if required.
- There is a general willingness from the local workforce to seek employment opportunities on the proposal, particularly local farmers and workers in the agricultural industry who require alternate income due to the prolonged drought conditions, and who have relevant skills for construction activities. Some local residents may need support to gain required certifications.
- The construction workforce should be primarily based in the local area rather than Fly In/Fly Out (FIFO) or Drive In/Drive Out (DIDO), as FIFO and DIDO workforces do not deliver local social and economic benefits.
- There is currently a construction skills shortage in the southern end of the study area due to several projects requiring local workforce (eg Dubbo Hospital redevelopment, Regional Rail program, Gilgandra solar farm). Councils have been working with the NSW Government to market workforce and business opportunities in the area. Inland Rail should coordinate with other projects to attract and retain workers in the local area.
- There is potential for competition for skilled workers and increased demand on local businesses and services to occur in the local study area if the drought breaks prior to or during construction.
- There are concerns regarding the use of the local water supply for construction activities. This would have a significant impact on the drought affected region. It is important for the proposal to utilise a sustainable water supply that does not impact the local communities.
- From a local environmental planning perspective, there are concerns about the impacts on land use as a result of acquisition for the proposal. Prime agricultural land that is subdivided as a result of acquisition would may have significant impacts on its productivity, reuse capacity and value.
- All local governments along the corridor want to work with Inland Rail to ensure the proposal provides more local benefits beyond training of the workforce in construction skills. Suggestions to deliver long term benefits included providing employment opportunities during operation, focusing on training young people to retain them in the region, upgrading community facilities, and business development related to the rail industry.

#### **5.2.4 Chambers of commerce**

The following issues and themes were raised by chambers of commerce representatives and members consulted for the Social Assessment:

- There is currently a skills shortage in the LGAs at the southern end of the corridor (Dubbo, Narromine and Gilgandra) due to several construction projects in the region. As a result there has been an increase in migrants and backpackers coming to the region for employment opportunities, however there have been challenges providing adequate accommodation for a transient workforce.
- There is a general willingness in the communities in the local study area to undertake the required training in order to pursue employment opportunities during construction.
- It will be important for Inland Rail to engage a primary contractor that will have a positive presence in the towns along the proposal area and is committed to connecting into local communities and supporting local businesses.
- The majority of representatives indicated that six to eight months prior to construction commencement would be sufficient lead time for employment and local business procurement opportunities. It will be important for the proposal to offer sustainable employment opportunities in both skilled and labour roles to retain young people in the area.
- Concerns were raised that workers will leave the region once construction is complete to seek other employment opportunities. This could result in a skills drain, increase the proportion of low socio-economic households, and have indirect impacts on local services, schools, sporting groups and businesses.
- The majority of chambers of commerce expressed a willingness to work with Inland Rail and the primary contractor to identify specific businesses with interest and capacity to work on the proposal. Some also indicated they would be willing to help support businesses to upskill, resource and prepare for opportunities.

#### **5.2.5 Local Aboriginal Land Councils**

The following issues and themes were raised by Local Aboriginal Land Council representatives and members consulted for the Social Assessment:

- Overall, most Aboriginal communities living in the study area are based in local towns, however there may be some Aboriginal people living in the Pilliga East State Forest.
- There is negative sentiment amongst Aboriginal stakeholders in the northern end of the study area regarding the Narrabri Gas Project. This project has created angst and mistrust about large infrastructure projects as they feel their values and concerns are being ignored.
- There is sentiment amongst Aboriginal stakeholders in the southern end of the study area that employment and business opportunities associated with the Inland Rail Parkes to Narromine project were not effectively communicated to Aboriginal communities, and opportunities were missed.
- There is some sentiment that Inland Rail's definition of 'local' does not align with cultural boundaries and connection to Country. Some stakeholders indicated it is disrespectful to allow Aboriginal people from outside of Country to work on their Country. Similarly, there is concern that some non-Indigenous people may claim Aboriginality to gain employment on the proposal.
- There is a general willingness from Aboriginal communities to pursue employment opportunities brought by the proposal. There is also a willingness to extend the

employment opportunities for Aboriginal people who were employed for Aboriginal heritage investigations for the proposal into further employment opportunities during construction.

- Early engagement and support will be important for the community to understand and access training and ticket requirements.
- The LALCs are generally willing to work with Inland Rail and their community to disseminate information about employment opportunities. Some LALCs are willing to support and organise necessary training and transport.
- There is interest from a number of LALCs along the proposal site to benefit from Inland Rail's community Sponsorship and Donations Program.

#### **5.2.6 Central West Regional Emergency Management Committee**

The following issues and themes were raised by the Central West Regional Emergency Management Committee consulted for the Social Assessment:

- It will be important to consult with Local Emergency Management Committees when information is available about changes to road access and connectivity so local service providers can comment on potential changes to emergency access. This includes access routes, numbers of trucks on roads, detours and construction access points.
- Experience from the Inland Rail Parkes to Narromine project shows there were no major changes to emergency service provision or access. However it was acknowledged this was a brownfield project, while the proposal is a greenfield project, so there could be some impacts on emergency services. Lessons from the Inland Rail Parkes to Narromine project should be reviewed and applied to the proposal.
- Some emergency services may need to increase staffing levels during construction, particularly those in smaller towns. Emergency services should be kept updated about the proposal including plans for the temporary workforce accommodation to ensure they can prepare adequately.
- Inland Rail will need to consult with local emergency management committees and NSW State Emergency Services about flooding and fire management for the proposal.

#### **5.2.7 Community facilities and services**

The following issues and themes were raised by community facilities and services impacted by the proposal and consulted for the Social Assessment:

- There is a general sentiment that the proposal is a significant opportunity and will bring employment and economic benefits for local communities, including the towns that will host temporary workforce accommodation facilities.
- Some stakeholders raised concerns about how impacts of the non-resident workforce would be managed (eg behaviour of workers) while other stakeholders discussed that non-resident workers are common in the region and have not caused any concerns.
- During discussions about the potential impacts of temporary workforce accommodation facilities, stakeholders requested detailed information about the facilities (eg number and size of buildings) as this information was noted to be important to help stakeholders prepare for and manage potential impacts. Some stakeholders raised concerns about potential impacts on local communities in close proximity to temporary workforce accommodation facilities, such as privacy, potential noise and traffic impacts, and perceived safety issues.
- Ongoing engagement and support will be important for community facility operators to understand and manage the potential impacts to their relevant facilities and users.



## 6 Existing social environment

This section provides the existing social conditions for the local and regional study area to provide the basis of assessment. The data was compiled in accordance with the methodology described in section 3.2.

### 6.1 Local study area baseline

As discussed in section 4.3.1, there are several towns and communities located in close proximity to the proposal site. This section provides an overview of the land use and access and connectivity in the local study area. This section also provides an overview of the towns/communities in close proximity to the proposal site, including key features, demographic characteristics, and community infrastructure.

#### 6.1.1 Overview of land use

The *ARTC Inland Rail Narromine to Narrabri Agriculture and Land Use Assessment* (JacobsGHD, 2020a) reports that across the five LGAs intersected by the proposal site, agricultural production accounts for 80 per cent of the total land area (44 per cent grazing, 32 per cent cropping, four per cent irrigated cropping and 0.1 per cent other agriculture). Conservation accounts for 13 per cent of the total land area of the LGAs, and includes the Pilliga State Conservation Area, Macquarie Marshes Nature Reserve, Nombinnie State Conservation Area and Yathong Nature Reserve. The Pilliga state forests also provides valuable forest materials that are not available from NSW coastal forests. These forests include Pilliga East State Forest, Bibblewindi State Forest and Jacks Creek State Forest.

The major crops grown within the regional study area are wheat, barley and chickpeas with areas of irrigated crops around Narromine and Narrabri. Beef cattle and sheep and lambs are the predominant livestock. The annual gross value of agricultural production across the five LGAs is \$988 million. Generally, the typical farm unit across the region consists of either grazing businesses, or mixed farming operations that run several different livestock or cropping enterprises on the same farm.

Land surrounding the southern and central portions of the proposal site is mainly used for agricultural and grazing purposes, while land use in the northern portion of the proposal site is dominated by reserves including state forests, conservation areas and national parks used for forestry and conservation purposes. The closest reserves to the southern and central portions of the proposal site include the Drillwarrina and Warrumbungle national parks.

About 413 properties would be affected by the proposal's land requirements during construction. Once completed, the proposal would traverse about 141 privately-owned properties and 133 publicly-owned properties.

The majority of the proposal (52 per cent) consists of freehold land, with other land tenure including Crown land, travelling stock reserves and land containing mineral resources.

#### 6.1.2 Access and connectivity

As discussed in the *ARTC Inland Rail Narromine to Narrabri Traffic and Transport Assessment* (JacobsGHD, 2020b), the proposal site crosses and/or is located in close proximity to a number of arterial, local and private roads. Arterial roads include the Mitchell Highway, Newell Highway, Oxley Highway, Castlereagh Highway and Kamilaroi Highway (discussed further in section 6.7.2).

The remaining road network includes a network of local roads and forestry access tracks. The local road network provides direct access to properties and to the main road network. Within the Pilliga East State Forest and associated state forest areas, 11 unsealed forestry access tracks cross the proposal site. There are also a number of Crown or 'paper' roads in the study area.

The majority of local roads crossed by the proposal site are unsealed, have no shoulders or line markings, and have low traffic volumes.

Traffic congestion throughout the study area is generally low with minimal delays experienced by road users.

### **6.1.3 Overview of towns and communities close to the proposal site**

The sections below provide a brief overview of the towns and communities in the local study area located close to the proposal site (as per scoping process described in section 4.3.1). This includes a description of the location of the town or community, overview of demographic characteristics and community values, and discussion about the community facilities in each town as relevant to the assessment.

#### **Narromine**

Narromine is the key town in Narromine LGA. It is located on the Mitchell Highway adjacent to the Macquarie River, about 43.7 kilometres west of Dubbo, which is a main service hub for the region. The Traditional Owners of the area are the Wiradjuri people, and Narromine was named after a corruption of a Wiradjuri word said to mean, 'place of many lizards' or 'place of honey' (Aussie Towns, 2020).

Narromine UCL had a population of 3,528 people in 2016, which was over half (54.7 per cent) the LGA population (6,444 people). Narromine had a relatively high proportion of Aboriginal and Torres Strait Islander people (24.5 per cent) compared to the LGA (19.9 per cent), with 67.3 per cent of the LGAs total Aboriginal and Torres Strait Islander population residing in Narromine. The median age of people in Narromine was 40 years, which is lower than the LGA (42 years) but still indicative of an older population. However, Narromine had a slightly higher proportion of children under 18 years (25.9 per cent) when compared to the LGA (25.1 per cent). Over half of the Narromine's population (56.5 per cent) had lived at the same address five years ago and 21.2 per cent had volunteered, which were both less than the LGA (60.7 per cent and 25.4 per cent respectively), but still higher than the state average (53.8 per cent and 18.1 per cent respectively) indicating relatively strong community connections.

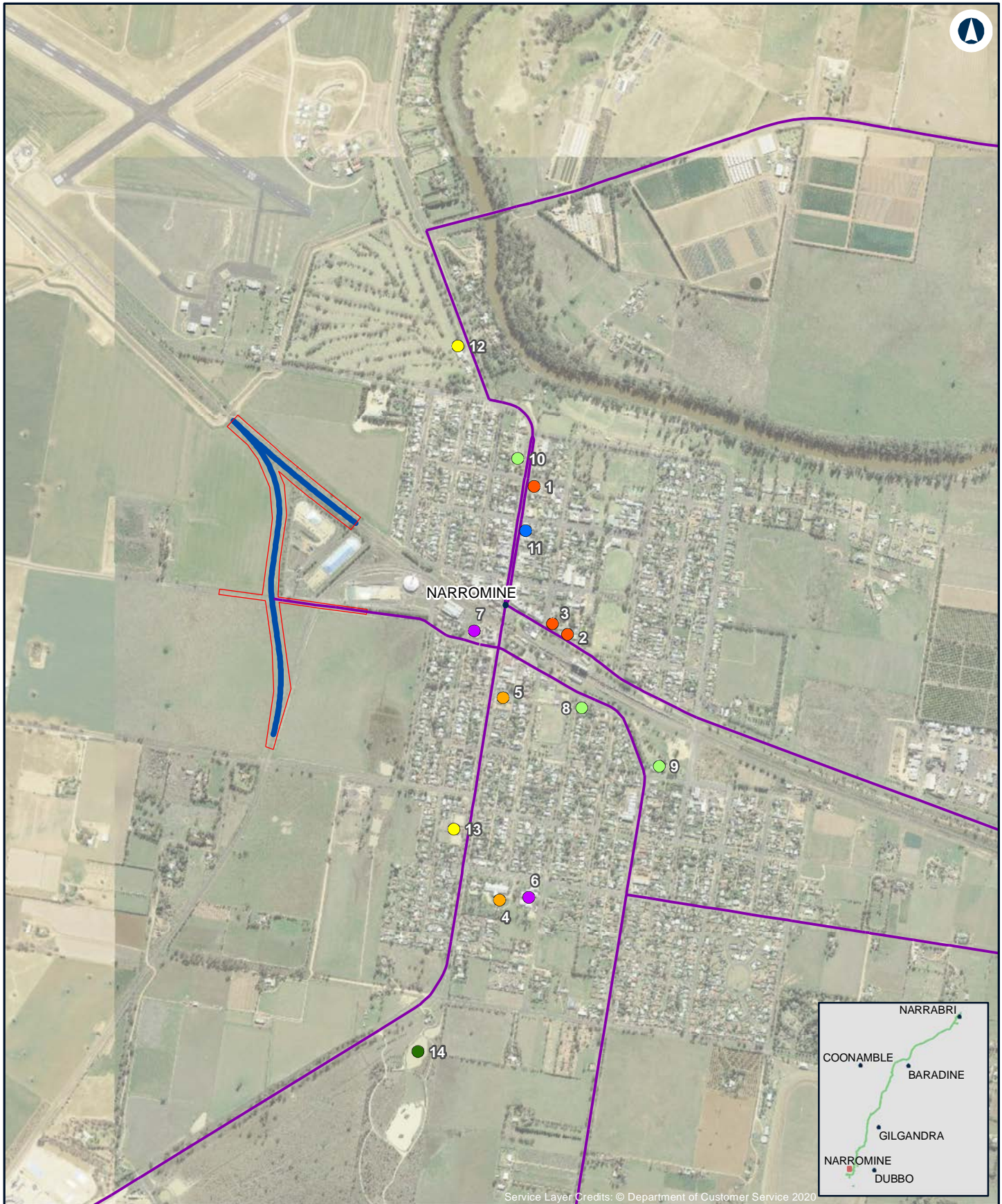
As discussed in section 6.2.1, the identities and values of Narromine residents have been shaped by the culture of the Wiradjuri People, early farmers and a strong aviation and sporting history. Residents are attracted to live in Narromine because it is a friendly place to live with a strong sense of community that values their services, facilities and natural rural environment (section 6.2.1). Additionally, Social Assessment consultation indicates people are attracted to live in Narromine due to its proximity to Dubbo, while having access to a rural lifestyle. Given the proximity of the LGA to Dubbo, some Narromine residents may rely on Dubbo for employment opportunities and access to services and facilities (eg medical services). However, there are also local services and facilities to meet the needs of residents. There is a supermarket, pharmacy, service station, hotels with pubs and cafes located within the town. Key community infrastructure that is located within close proximity to the proposal site and haulage routes are outlined in Table 6.1.

**Table 6.1 Narromine town community infrastructure**

Facility type	ID	Facility name
Emergency Services	1	Narromine Ambulance Station
	2	Narromine Fire Station
	3	Narromine Police Station
Health facility	4	Narromine Hospital & Community Health
	5	Narromine Shire Medical Centre
Aged care	6	Timbrebongie House Hostel
	7	Derribong Villas
Education	8	Narromine Pre-School Kindergarten Inc.
	9	Narromine Christian School
	10	St Augustines Parish School
Community and cultural	11	Narromine Library
Sports and recreation	12	Narromine Golf Club
	13	Narromine Bowling Club
Open space	14	Narromine Wetlands

Figure 6.1 shows the location of community infrastructure in Narromine. A summary of community facilities in the wider LGA is provided in Appendix C. Further information on the Narromine LGA is located in section 6.2.1.



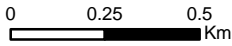


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## NARROMINE TO NARRABRI

### Map of Narromine town

Figure 6.1



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#### LEGEND

- The proposal site
- Alignment
- Construction access road
- Community and cultural
- Emergency services
- Health facility
- Education
- Aged care facility
- Sport and recreation
- Open space



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## Gilgandra

The town of Gilgandra is located at the intersection of Newell Highway, Oxley Highway and Castlereagh Highway. It is located about 67.5 kilometres north of Dubbo, and is the key town of the Gilgandra LGA. The Traditional Owners are the Wiradjuri people who, during Social Assessment consultation, described Gilgandra as being a meeting place between the Wiradjuri, Kamilaroi & Wailwan nations. The town is also historically famous for the 1915 'Coo-ee March' when a group of men set off from Gilgandra to march to Sydney to help in the WW1 effort. The *Gilgandra Shire Council Community Strategic Plan 2017/18 – 2026/27* (Gilgandra Shire Council, 2017) indicates that Gilgandra residents are a proud, solid and supportive rural-based community, and that the town provides a range of facilities and services. The plan also recognises that the population is ageing, and identifies the Gilgandra's strong social capital through volunteering and community events.

Gilgandra UCL had a population of 2,595 people in 2016, which was 61.3 per cent of the LGA population (4,226 people). Gilgandra had a relatively high proportion of Aboriginal and Torres Strait Islander people (19.3 per cent) compared to the LGA (14.1 per cent), with 84.3 per cent of the LGA's total Aboriginal and Torres Strait Islander population residing in Gilgandra. Gilgandra is characterised by an older population with the median age of people in Gilgandra at 44 years, similar to the LGA (45 years). Over half of Narromine town's population (56 per cent) had lived at the same address five years ago which is higher than the LGA (60.6 per cent) but lower than the state average (53.8 per cent). Similarly, 22.3 per cent of Narromine's population had volunteered, which was less than the LGA (26.8 per cent respectively), but still higher than the state (18.1 per cent). Together, these indicators suggest there are relatively strong community connections in Narromine town. Gilgandra had a high proportion of unemployed persons at 8.8 per cent compared to the LGA (5.4 per cent) and the state average (6.3 per cent). The highest occupations of employed residents were community and personal services at 18.4 per cent and labourers at 15.7 per cent.

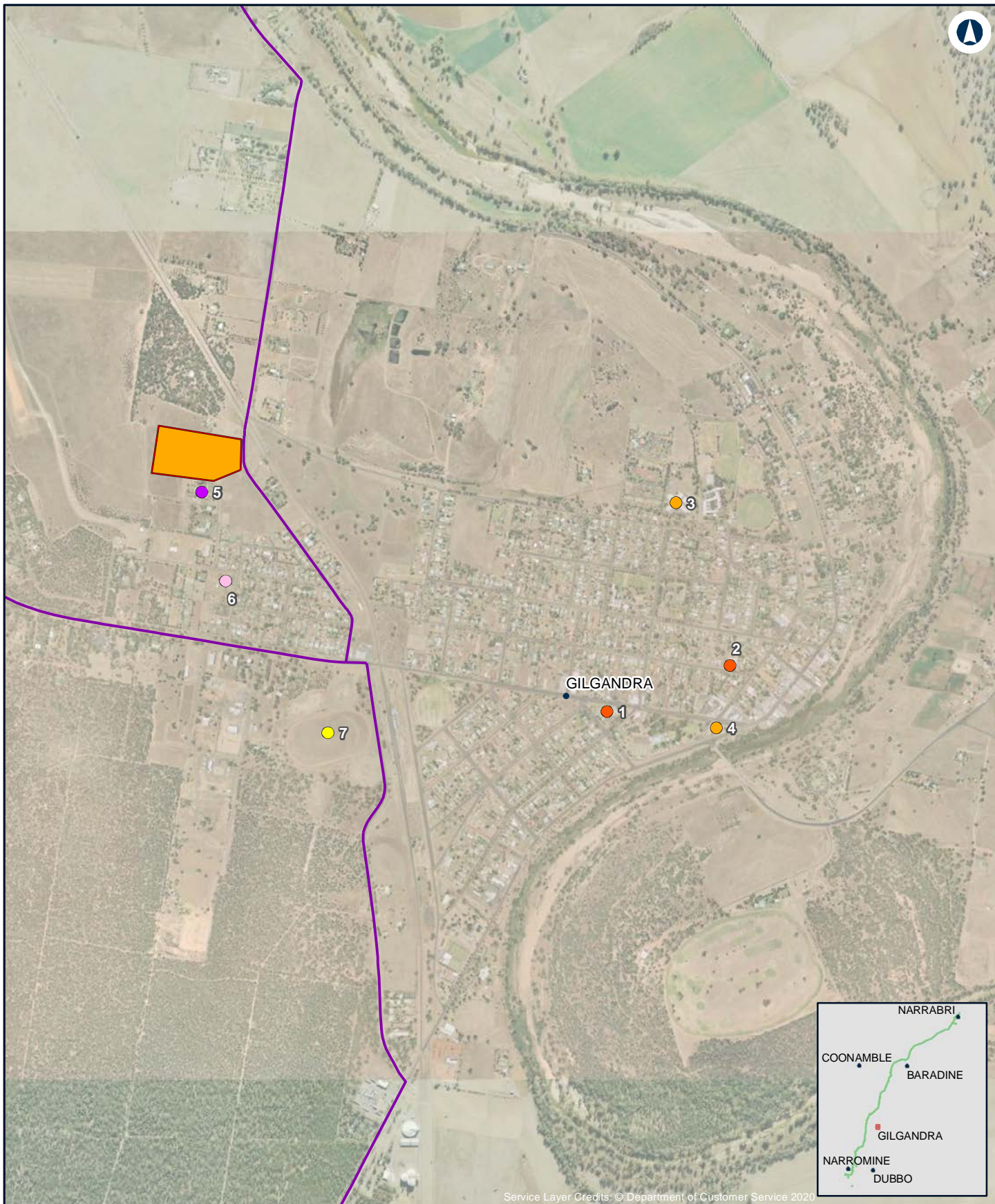
There is a supermarket, pharmacy, service station, hotels with pubs and cafes located within the town. Social Assessment consultations indicate that Gilgandra residents rely on Dubbo for access to some services and facilities, particularly health services. Key community infrastructure that is located within close proximity to the proposal site and haulage routes are outlined in Table 6.2.

**Table 6.2 Gilgandra town community infrastructure**

Facility type	ID	Facility name
Emergency Services	1	Fire and Rescue NSW Gilgandra Fire Station
	2	Gilgandra Police Station
Health facility	3	Gilgandra District Hospital and Community Health Centre
	4	Gilgandra Medical Centre
Aged care	5	Jack Towney Hostel
Child care	6	Aussie Kindies Early Learning Gilgandra
Sports and recreation	7	Gilgandra Showground

Figure 6.2 shows the location of community infrastructure in Gilgandra. A summary of community facilities in the wider LGA is provided in Appendix C. Further information on the Gilgandra LGA is located in section 6.2.2.





## NARROMINE TO NARRABRI

## Map of Gilgandra town

Figure 6.2

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Km

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### LEGEND

- The proposal site
- Construction access road
- Temporary workforce accommodation
- Emergency services

- Health facility
- Child care
- Aged care facility
- Sport and recreation

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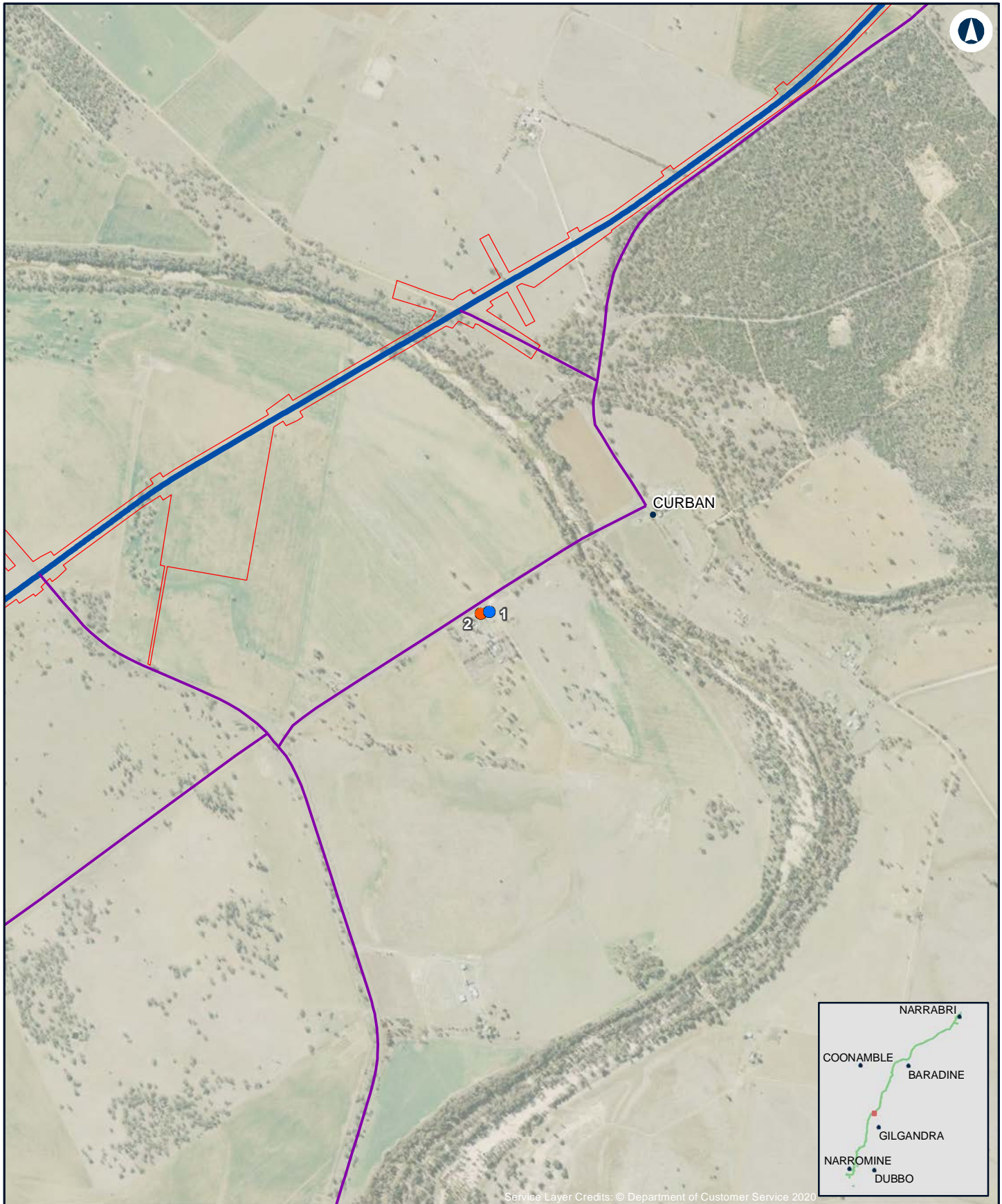
## Curban

The proposal site passes through the community of Curban, which is located in Gilgandra LGA about 20 kilometres north of the town of Gilgandra along the Castlereagh Highway (see section 6.2.2). The Curban community is primarily made up of local farmers that have formed strong community networks.

In 2016, Curban had a population of 131 people, with a total of 64 private dwellings. The population of the suburb makes up 3.1 per cent of the total LGA population (4,236). Curban is characterised by an older population with the median age of people in at 45 years, the same as the LGA. The proportion of home ownership in Curban (76.7 per cent) was higher than the LGA (66.9 per cent) and 63.6 per cent of the population had lived at the same address five years ago, which is slightly higher than the LGA (60.6 per cent). Similarly, the proportion of people who volunteered was higher than the LGA (26.8 per cent compared to 38.1 per cent). The high proportion of home ownership, volunteering and stable population are indicative of strong community connections. Managers was the highest indicated occupation at 58.6 per cent, which likely reflects the high proportion of farms. Curban had a significantly higher weekly household income when compared to the LGA (\$1,468 per week compared to \$998).

The community of Curban takes pride in the management of their community hall located on National Park Road, which was delegated to the Curban Community Hall & Tennis Management Committee by Gilgandra Council in 2016. The hall includes tennis courts and provides a location for community recreation, events and is available for private hire. Curban does not have a town centre, and the community hall acts as a focal point for the community. The only other community facility located in Curban is Curban Rural Fire Brigade which operates out of the town hall.

Figure 6.3 shows the location of community infrastructure in Curban. A summary of community facilities in the wider LGA is provided in Appendix C. Further information on Gilgandra LGA is located in section 6.2.2.



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## NARROMINE TO NARRABRI

### Map of Curban

Figure 6.3

0 0.25 0.5  
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#### LEGEND

- The proposal site
- Alignment
- Construction access road
- Community and cultural

- Emergency services

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## Baradine

Baradine is a small town in the Warrumbungle Shire located about 46 kilometres north-west on Baradine Road from Coonabarabran, which is the main town in the LGA. The Traditional Owners of the area are the Kamilaroi people, with Baradine meaning 'red wallaby' (NSW State Library, 2015). Baradine is known as the gateway to the Pilliga and was a centre for the forestry industries. The town still has a strong forestry industry but has more recently become a tourist destination for those visiting the Pilliga. This has been assisted by the opening of the Pilliga Forest Discovery Centre, an architecturally designed, environmentally sustainable, multipurpose facility that has a conference hall for hire (National Parks, 2020).

In 2016, Baradine UCL had a population of 626 people, making up 6.7 per cent of the total LGA population (9,384), with 27 per cent residing in the main town of Coonabarabran. Baradine and the LGA are characterised by an older population with a median age of 49 years. Baradine had a higher proportion of Aboriginal and Torres Strait Islander people (16.7 per cent) compared to the LGA (9.8 per cent). Over half of the town's population (56 per cent) had lived at the same address five years ago and 22.3 per cent had volunteered. These proportions are both less than the LGA (60.6 per cent and 26.8 per cent respectively), but still higher than the state average (53.8 per cent and 18.1 per cent) indicating relatively strong community connections. Baradine had a high proportion of unemployed persons at 10 per cent compared to the LGA (7.9 per cent). The highest occupation for employed Baradine residents was labourers 19.6 per cent.

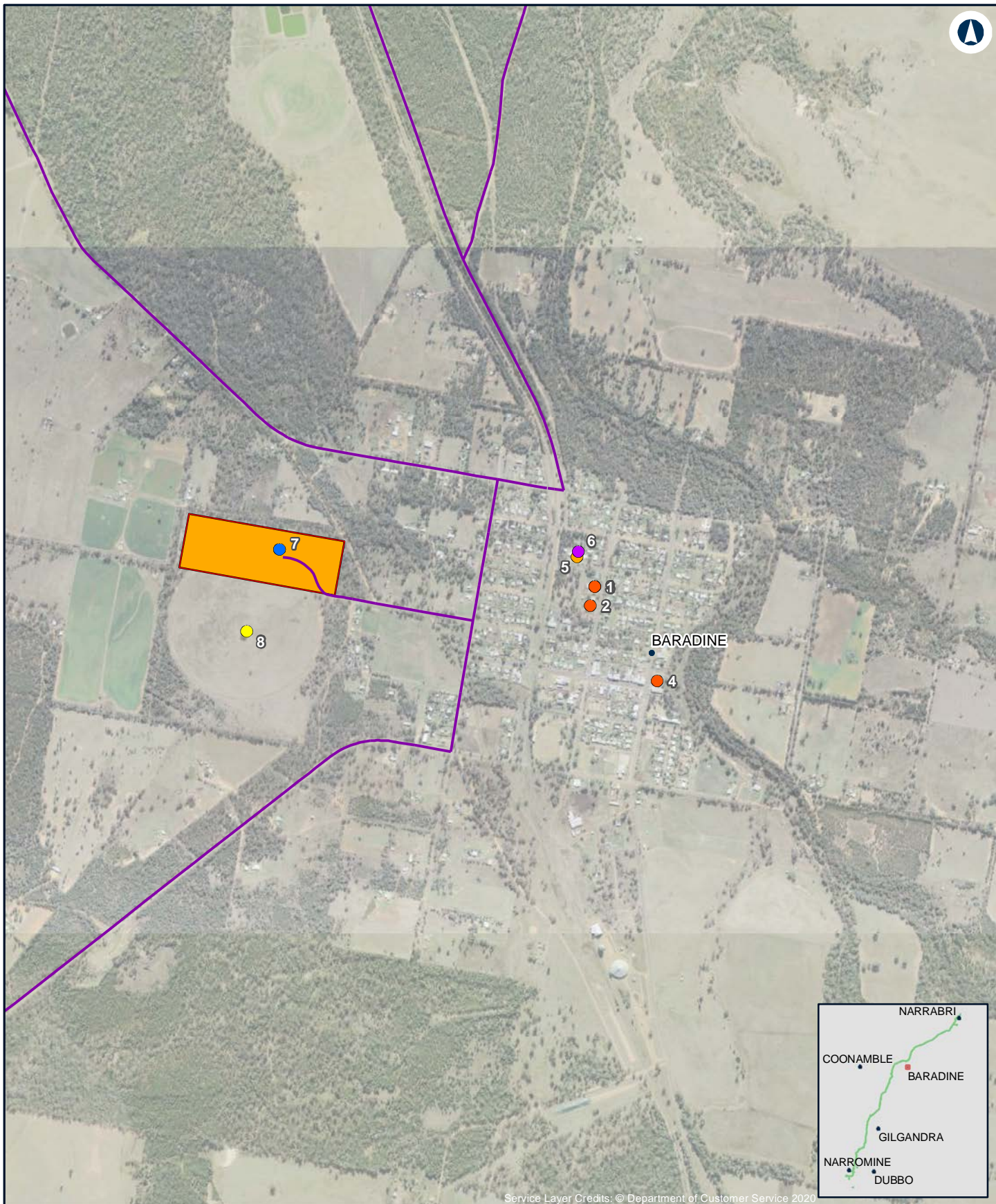
The town is serviced by some local community infrastructure and businesses, including a hospital, school, and sporting facilities. There is a supermarket, pharmacy, service station, hotels with pubs and cafes located within the town. Social Assessment consultation indicate that some LGA residents rely on larger population centres like Dubbo or Tamworth for access to some services and facilities, particularly health services. Key community infrastructure that is located within close proximity to the proposal site and haulage routes are outlined in Table 6.3.

**Table 6.3 Baradine town community infrastructure**

Facility type	ID	Facility name
Emergency Services	1	Baradine Rural Fire Brigade
	2	Baradine Police Station
	3	Baradine SES
	4	NSW Ambulance
Health facility	5	Baradine Multi-Purpose Service
Aged care	6	Baradine Multi-Purpose Service
Community and cultural	7	Camp Cypress
Sports and recreation	8	Baradine Showground

Figure 6.4 shows the location of community infrastructure in Baradine. A summary of community facilities in the wider LGA is provided in Appendix C. Further information on Warrumbungle LGA is located in section 6.2.4.





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## NARROMINE TO NARRABRI

## Map of Baradine town

Figure 6.4

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### LEGEND

- The proposal site
- Construction access road
- Temporary workforce accommodation
- Community and cultural

- Emergency services
- Health facility
- Aged care facility
- Sport and recreation

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## Narrabri

Narrabri is the major town in Narrabri LGA, located 173 kilometres north-west of Tamworth which is a main service hub for the region. The Traditional Owners of the area are the Kamilaroi people, with the name Narrabri being Aboriginal in origin with several possible meanings which include 'snake place', 'big creek' or 'Forked Sticks' (Narrabri online business services, 2013). Narrabri residents value their 'busy country' lifestyle with strong community connections and a diverse economy, and access to a range of facilities and services, as well as national parks (Narrabri Shire Council, 2017).

Narrabri UCL had a population of 5,903 people in 2016, which was 45.1 per cent of the LGA population (13,084 people). Half of the LGA's Aboriginal and Torres Strait Islander residents live in Narrabri UCL, although overall the proportion as a per cent of the total population is similar to the LGA (13.8 per cent compared to 12.2 per cent). The median age of people in Narrabri was 38 years, which is lower than the LGA (40 years). Over half of Narrabri's population (55.6 per cent) had lived at the same address five years ago, which was slightly less than the LGA (58.5 per cent) but slightly higher than the state average (53.8 per cent). Similarly, 23.4 per cent had volunteered, which was also slightly less than the LGA (24.6 per cent respectively), but still higher than the state average (18.1 per cent respectively). Together, these indicators demonstrate relatively strong community connections in Narrabri. The highest occupations for employed residents was technicians and trades (16.7 per cent), professionals (16.1 per cent) and labourers (12.7 per cent).

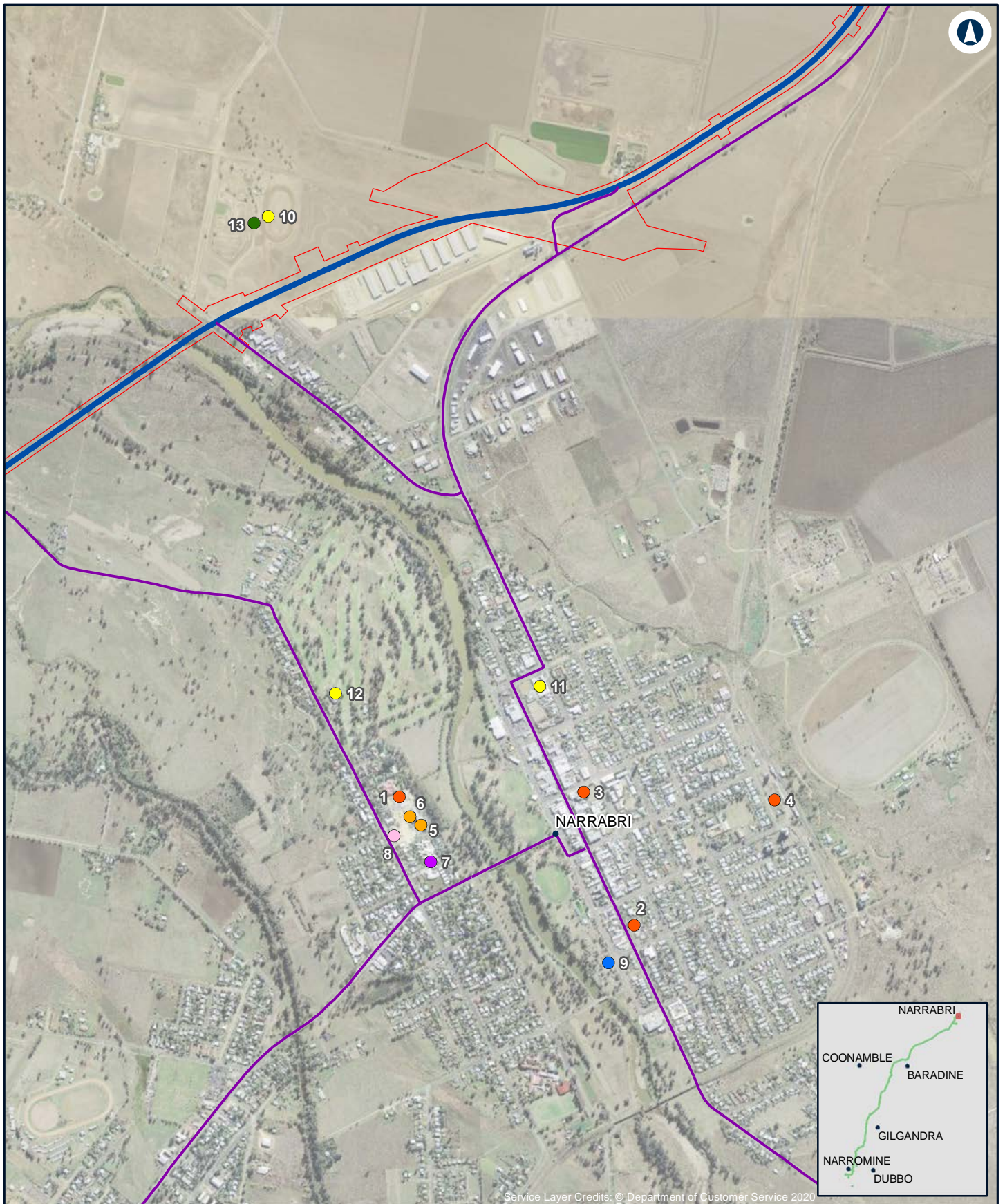
Narrabri is the civic centre for the LGA and where the majority of community facilities and services are located. Additionally, there are supermarkets, a pharmacy, service stations, hotels with pubs and cafes located within the town. Social Assessment consultations indicate that residents of surrounding LGAs rely on Narrabri for access to some employment and services. Key community infrastructure that is located within close proximity to the proposal site and haulage routes are outlined in Table 6.4.

**Table 6.4 Narrabri town community infrastructure**

Facility type	ID	Facility name
Emergency Services	1	Narrabri Ambulance Station
	2	Narrabri Police Station
	3	Fire and Rescue NSW Narrabri Fire Station
	4	State Emergency Services
Health facility	5	Narrabri Community Health Centre
	6	Narrabri Public Hospital
Aged care	7	Whiddon Narrabri
Child care	8	Nurruby Childcare Centre and Preschool
Community and cultural	9	The Crossing Theatre
Sports and recreation	10	Narrabri Dirt Bike Club
	11	Narrabri Bowling Club
	12	Narrabri Golf Club
Open space	13	Newtown Park

Figure 6.5 shows the location of community infrastructure in Narrabri. A summary of community facilities in the wider LGA is provided in Appendix C. Further information on the Narrabri LGA is located in section 6.2.4.





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## NARROMINE TO NARRABRI

## Map of Narrabri town

Figure 6.5

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Km

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### LEGEND

- The proposal site
- Alignment
- Construction access road
- Community and cultural
- Emergency services

- Health facility
- Child care
- Aged care facility
- Sport and recreation
- Open space

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## 6.2 Regional study area baseline

The main population centre at the north end of the study area is the town of Narrabri, which is located about 5.7 kilometres from the proposal site. Dubbo is the major population centre closest to the southern end of the study area (about 35 kilometres east). Both Narrabri and Dubbo provide employment, regional level and district services and facilities for surrounding rural towns and communities. The Dubbo LGA is not directly affected by the proposal, but is an important part of the socio-economic environment of the study area.

Other larger towns that are close to the proposal site in the region include Narromine, Gilgandra, Coonamble and Coonabarabran, as well as smaller towns of Curban, Gulargambone and Baradine (see section 6.1).

The following sections provide a demographic and community overview of each LGA within the regional study area from Narromine in the south to Narrabri in the north, as well as overall information on industry and business, employment and workforce availability, socio-economic advantage and disadvantage, accommodation and housing and access and transport.

### 6.2.1 Narromine LGA

Narromine LGA is located in the Central West and Orana region on the lands of the Wiradjuri people. It covers an area of about 5,200 square kilometres. As discussed in section 6.1.3, Narromine town is the key town in the shire, with other towns in the shire including Trangie and Tomingley.

#### *Population and demographic characteristics*

In 2016, Narromine LGA had a population of about 6,444 people and experienced a slight decline of -0.4 per cent per annum between 2011 and 2016 (ABS (2017)). Narromine LGA is characterised by:

- a higher proportion of Indigenous people, comprising around 19.9 per cent of the total population compared to the regional study area (15.3 per cent) and NSW (2.9 per cent)
- an older population, with a median age of 42 years and around 21.3 per cent of the population aged 65 years or older compared to the regional study area (18.6 per cent) and NSW (16.3 per cent)
- a higher household income at \$1,078 compared to \$998 in the regional study area, but lower than \$1,486 in NSW
- a higher rate of unemployment at 7.4 per cent compared to the regional study area (6.3 per cent) and NSW (6.3 per cent)
- a higher proportion of people who volunteer at 25.4 per cent compared to the regional study area (22.3 per cent) and NSW (18.1 per cent).

A summary of key population and demographic characteristics for the Narromine LGA is provided in Table 6.5.

**Table 6.5 Narromine LGA – key population and demographic characteristics, 2016**

Characteristic	Narromine LGA	Regional study area*	NSW
Population (Estimated Resident Population (ERP) 2018)	6,567	89,675	7,988,241
Population change 2011-2016 (%)	-0.4	0.6	1.6
Population projection to year 2041	5,121	91,700	10,572,696
Indigenous (%)	19.9	15.3	2.9
Male (%)	50	49.2	49.3
Median age	42	40	38
Housing (total private dwellings) (number)	2,638	35,509	2,889,057
Owner occupied houses (%)	67.6	65.4	64.5
Rental houses (%)	27.9	30.0	31.8
Median household income (\$)	1,078	998	1,486
Completed Year 12 (%)	32.9	35.1	53.9
People who volunteer (%)	25.4	22.2	18.1

\*Note: Regional study area statistics have been calculated by aggregating the statistics for Narromine, Dubbo, Gilgandra, Coonamble, Warrumbungle and Narrabri LGAs.

Source: ABS (2017) 2016 Census of Population and Housing. General Community Profile. Catalogue number 2001.0; ABS (2018) ERP by LGA (ASGS 2018). Retrieved from [http://stat.data.abs.gov.au/Index.aspx?DataSetCode=ABS\\_ERP\\_LGA2018](http://stat.data.abs.gov.au/Index.aspx?DataSetCode=ABS_ERP_LGA2018); NSW Government (2019) Narromine Shire Council 2019 NSW Population Projections. Retrieved from <https://www.planning.nsw.gov.au/Research-and-Demography/Population-projections/Projections>

### Community values

According to the *Narromine Shire Community Strategic Plan 2027* (Narromine Shire Council, 2017), residents value the strong sense of community, rural lifestyle, community and medical facilities, proximity to work and Dubbo, the peaceful amenity and clean air. According to council, both residents and visitors have access to a range of facilities and services in Dubbo while enjoying the quiet rural environment of the shire. These aspects are likely to continue to attract retirees from western NSW to the area.

According to the *Community Strategic Plan: Narromine Shire 2023* (Narromine Shire Council, 2013), the identities and values of Narromine Shire have been shaped by the culture of the Wiradjuri People, early farmers and a strong aviation and sporting history. Narromine Shire is famous for Narromine Oranges and contains the largest lime orchard (The Lime Grove) in the southern hemisphere.

The Trangie and Narromine showgrounds are focal points for community activities and attract people into the shire through events. Major natural features of the Shire include Goobang National Park, the Bogan River, the Macquarie River and several state forests.

### *Community infrastructure*

Narromine is the closest town in the LGA to the proposal site (about eight kilometres north of the southern end of the proposal site), which is where the majority of the LGAs key community facilities are located (see section 6.1.3). Other key community infrastructure in the shire includes Fire and Rescue NSW Trangie Fire Station, Trangie Police Station, Trangie Hospital, Trangie Central School, Tomingley Public School, Tomingley Racecourse and Trangie Golf Club and Three Mile Reserve. Social Assessment consultation identified that an informal reserve known as Three Mile Reserve is located on the Webbs Siding traveling stock reserve near Narromine and is iconic to the local community, as people often undertake water-based recreational activities when the Macquarie River is full. Three Mile Reserve also has Aboriginal cultural significance as an Aboriginal gathering place in the past. An audit of community infrastructure for Narromine and the wider shire area is provided in Appendix C.

#### **6.2.2 Gilgandra LGA**

Gilgandra LGA is located adjacent to the junction of the Newell, Oxley and Castlereagh highways to the north of Dubbo. The shire spans an area of around 4,800 square kilometres, is traversed by the Castlereagh River and includes part of the Warrumbungle National Park. Gilgandra Shire is also described as being the meeting place between the Wiradjuri, Kamilaroi and Wailwan nations.

As discussed in section 4.3.1, the main town is Gilgandra, with other towns in the shire including Balladoran and the community of Curban (see section 6.1.3).

### *Population and demographic characteristics*

In 2016, Gilgandra LGA had a population of about 4,236 and experienced a slight population decline of 0.6 per cent per annum between 2011 and 2016 (ABS (2017)). Communities in the LGA are generally characterised by:

- a smaller Indigenous population, comprised of 14.1 per cent of the total population, compared to the regional study area (15.3 per cent), and a higher population compared to and NSW (2.9 per cent)
- an older population, with a median age of 45 years and around 23.6 per cent of the population aged 65 years or older compared to the regional study area (18.6 per cent) and NSW (16.3 per cent)
- a higher rate of people who require assistance at 7.3 per cent compared to the regional study area (5.8 per cent) and NSW (5.4 per cent)
- the same household income at \$998 as the regional study area, but lower compared to \$1,486 in NSW
- a slightly lower rate of unemployment at 5.8 per cent compared to the regional study area (6.3 per cent) and NSW (6.3 per cent)
- a higher proportion of people who volunteer at 26.8 per cent compared to NSW (18.1 per cent) but lower than the regional study area (22.3 per cent).

A summary of key population and demographic characteristics for the Gilgandra LGA is provided in Table 6.6.

**Table 6.6 Gilgandra LGA – key population and demographic characteristics, 2016**

Characteristic	Gilgandra LGA	Regional study area*	NSW
Population (ERP 2018)	4,226	89,675	7,988,241
Population change 2011-2016 (%)	-0.6	0.6	1.6
Population projection 2041	3,322	91,700	10,572,696
Indigenous (%)	14.1	15.3	2.9
Male (%)	49.6	49.2	49.3
Median age	45	40	38
Housing (total private dwellings) (number)	1,830	35,509	2,889,057
Owner occupied houses (%)	66.9	65.4	64.5
Rental houses (%)	27.7	30.0	31.8
Median household income (\$)	998	998	1,486
Completed Year 12 (%)	28.1	35.1	53.9
People who volunteer (%)	26.8	22.2	18.1

\*Note: Regional study area statistics have been calculated by aggregating the statistics for Narromine, Dubbo, Gilgandra, Coonamble, Warrumbungle and Narrabri LGAs.

Source: ABS (2017) 2016 Census of Population and Housing. General Community Profile. Catalogue number 2001.0; ABS (2018) ERP by LGA (ASGS 2018). Retrieved from [http://stat.data.abs.gov.au/Index.aspx?DataSetCode=ABS\\_ERP\\_LGA2018](http://stat.data.abs.gov.au/Index.aspx?DataSetCode=ABS_ERP_LGA2018); NSW Government (2019) Gilgandra Shire Council 2019 NSW Population Projections. Retrieved from <https://www.planning.nsw.gov.au/Research-and-Demography/Population-projections/Projections>

### Community values

According to the *Gilgandra Shire Council Community Strategic Plan 2017/18 – 2026/27* (Gilgandra Shire Council, 2017), Gilgandra Shire is primarily a rural and agricultural community. Residents benefit from its proximity to Dubbo's regional facilities and services, which is less than one hour's drive to the south.

Gilgandra residents value their social connectedness and sense of community. This is demonstrated by the significant number of volunteers at cultural, sporting and community events. There are a number of museums and galleries in Gilgandra which recognise the LGA's Indigenous and European heritage and farming history.

The Gilgandra community faces social challenges, including sustaining community and other infrastructure, economic development and diversification, and population decline.

### Community infrastructure

Gilgandra is the closest town within the LGA to the proposal, which is about 16.5 kilometres east of the proposal site. The majority of the LGA's community infrastructure is located in Gilgandra, including emergency services, community health services, aged care, TAFE NSW campus, local schools, a library, an art gallery, a museum, a showground, parks, and sport and recreation facilities.

Jack Towney Hostel is an aged care facility for Aboriginal and Torres Strait Islander people. It is located adjacent to a preferred location for the Gilgandra temporary workforce accommodation facility. According to Social Assessment consultation, the hostel is owned by Jack Towney Hostel Aboriginal Corporation, and is managed by Gilgandra Shire Council. The hostel provides supported living for up to 13 Aboriginal and Torres Strait Islander seniors over 50 years of age, and has been operating since 1998. There are 12 staff members who work at the hostel.

Appendix C provides an overview of community infrastructure located in Gilgandra.

### **6.2.3 Coonamble LGA**

Coonamble LGA is located adjacent to the Castlereagh Highway and the Castlereagh River. It spans an area of around 9,900 square kilometres and includes the towns of Coonamble, Gulargambone and Quambone. Around 61.5 per cent of the shire's population resides in Coonamble. Coonamble is the traditional home of the Gamilaraay and Weilwan Aboriginal communities.

Social Assessment consultations indicate that Coonamble residents rely on larger population centres of Dubbo and Narrabri for access to some services and facilities particularly health services.

#### ***Population and demographic characteristics***

In 2016, Coonamble Shire LGA had a population of about 3,918 and experienced a slight population decline of -0.6 per cent per annum between 2011 and 2016 (ABS (2017)).

Communities in the LGA are generally characterised by:

- Indigenous people, comprising around 30.2 per cent of the total population compared to the regional study area (15.3 per cent) and NSW (2.9 per cent)
- an older population, with a median age of 43 years and around 20.0 per cent of the population aged 65 years or older compared to the regional study area (18.6 per cent) and NSW (16.3 per cent)
- a higher rate of people who require assistance at 7.1 per cent compared to the regional study area (5.8 per cent) and NSW (5.4 per cent)
- a lower household income at \$976 compared to \$998 in the regional study area and \$1,486 in NSW
- a higher rate of unemployment at 9.0 per cent compared to the regional study area (6.3 per cent) and NSW (6.3 per cent)
- a higher proportion of people who volunteer at 20.6 per cent compared to NSW (18.1 per cent) but lower than the regional study area (22.3 per cent).

A summary of key population and demographic characteristics for the Coonamble LGA is provided in Table 6.7.

**Table 6.7 Coonamble LGA – key population and demographic characteristics, 2016**

Characteristic	Coonamble LGA	Regional study area*	NSW
Population (ERP 2018)	4,014	89,675	7,988,241
Population change 2011-2016 (%)	-0.6	0.6	1.6
Population projection 2041	3,442	91,700	10,572,696
Indigenous (%)	30.2	15.3	2.9
Male (%)	49.6	49.2	49.3
Median age	43	40	38
Housing (total private dwellings) (number)	1,370	35,509	2,889,057
Owner occupied houses (%)	62.6	65.4	64.5
Rental houses (%)	30.8	30.0	31.8
Median household income (\$)	976	998	1,486
Completed Year 12 (%)	28.0	35.1	53.9
People who volunteer (%)	20.6	22.2	18.1

\*Note: Regional study area statistics have been calculated by aggregating the statistics for Narramine, Dubbo, Gilgandra, Coonamble, Warrumbungle and Narrabri LGAs.

Source: ABS (2017) 2016 Census of Population and Housing. General Community Profile. Catalogue number 2001.0; ABS (2018) ERP by LGA (ASGS 2018). Retrieved from [http://stat.data.abs.gov.au/Index.aspx?DataSetCode=ABS\\_ERP\\_LGA2018](http://stat.data.abs.gov.au/Index.aspx?DataSetCode=ABS_ERP_LGA2018); NSW Government (2019) Coonamble Shire Council 2019 NSW Population Projections. Retrieved from <https://www.planning.nsw.gov.au/Research-and-Demography/Population-projections/Projections>

### Community values

Coonamble Shire is a rural area and traditional home of the Gamilaraay and Weilwan Aboriginal communities. According to the *Coonamble Shire 2032 Community Strategic Plan* (Coonamble Shire Council, 2017), residents value the strong sense of community and commitment to the town, community groups, outdoor activities, events such as the rodeo, and the natural environment.

Coonamble Shire faces social challenges, including a decreasing population influenced by economic, employment and education factors, an increasing crime level, attraction of relevant services, and maintenance of the community cohesion of the shire. Economic growth of the shire is affected by the limited of employment opportunities and shopping options, which has led to an ongoing out-migration of residents, particularly young people who seek these opportunities outside of the LGA.

As a result, residents would like to see more opportunities for education, employment, recreation, community services and improved communication between community stakeholders.



### *Community infrastructure*

Gulargambone is the closest town within the LGA to the proposal (about 25 kilometres north west along the Castlereagh Highway) with key community infrastructure including Gulargambone Central School, Gulargambone Multi-Purpose Health Service and Gulargambone Bowling Club. Many additional key community infrastructure and facilities are concentrated in Coonamble, which is about 42 kilometres north-west of Gulargambone and 43 kilometres west of the proposal site. Appendix C provides an overview of the community infrastructure located in Coonamble, which includes emergency services, a hospital, TAFE NSW campus, local schools, a neighbourhood centre, showground, library, museum, sport and recreation facilities and local parks.

#### **6.2.4 Warrumbungle LGA**

Warrumbungle LGA is traversed by the Newell Highway mid-way between Brisbane and Melbourne and spans an area of around 12,400 square kilometres. As discussed in section 6.1.3, the main town in Warrumbungle Shire is Coonabarabran, with other key towns including Binnaway, Coolah, Dunedoo, Baradine and Mendooran.

The economy is traditionally built on agriculture including wool, beef cattle and cropping. It has a growing tourism industry, with the Warrumbungle National Park, Siding Spring Observatory and the Pilliga Forest Discovery Centre at Baradine as local attractions. Social Assessment consultation also indicated there has been a decline in the forestry industry in the region which has contributed to population decline.

### *Population and demographic characteristics*

In 2016, Warrumbungle LGA had a population of about 9,451 and experienced a slight population decline of -0.4 per cent per annum between 2011 and 2016 (ABS (2017). Communities in the LGA are generally characterised by:

- a higher Indigenous population, comprising around 9.8 per cent of the total population compared to and NSW (2.9 per cent) but lower than the regional study area (15.3 per cent)
- an older population, with a median age of 49 years and around 26.1 per cent of the population aged 65 years or older compared to the regional study area (18.6 per cent) and NSW (16.3 per cent)
- a higher rate of people who require assistance at 7.3 per cent compared to the regional study area (5.8 per cent) and NSW (5.4 per cent)
- a lower household income at \$878 compared to \$998 in the regional study area and \$1,486 in NSW
- a higher rate of unemployment at 7.9 per cent compared to the regional study area (6.3 per cent) and NSW (6.3 per cent)
- a higher proportion of people who volunteer at 28.4 per cent compared to NSW (18.1 per cent) but lower than the regional study area (22.3 per cent).

A summary of key population and demographic characteristics for Warrumbungle LGA is provided in Table 6.8.

**Table 6.8 Warrumbungle LGA – key population and demographic characteristics, 2016**

Characteristic	Warrumbungle LGA	Regional study area*	NSW
Population (ERP 2018)	9,451	89,675	7,988,241
Population change 2011-2016 (%)	-0.4	0.6	1.6
Population projection 2041	8,650	91,700	10,572,696
Indigenous (%)	9.8	15.3	2.9
Male (%)	50.0	49.2	49.3
Median age	49	40	38
Housing (total private dwellings) (number)	4,280	35,509	2,889,057
Owner occupied houses (%)	69.4	65.4	64.5
Rental houses (%)	25.8	30.0	31.8
Median household income (\$)	878	998	1,486
Completed Year 12 (%)	30.5	35.1	53.9
People who volunteer (%)	28.4	22.2	18.1

\*Note: Regional study area statistics have been calculated by aggregating the statistics for Narromine, Dubbo, Gilgandra, Coonamble, Warrumbungle and Narrabri LGAs.

Source: ABS (2017) 2016 Census of Population and Housing. General Community Profile. Catalogue number 2001.0; ABS (2018) ERP by LGA (ASGS 2018). Retrieved from [http://stat.data.abs.gov.au/Index.aspx?DataSetCode=ABS\\_ERP\\_LGA2018](http://stat.data.abs.gov.au/Index.aspx?DataSetCode=ABS_ERP_LGA2018); NSW Government (2019) Warrumbungle Shire Council 2019 NSW Population Projections. Retrieved from <https://www.planning.nsw.gov.au/Research-and-Demography/Population-projections/Projections>

### Community values

According to the *Warrumbungle Shire Community Strategic Plan (Reviewed) 2017-2032* (Warrumbungle Shire Council, 2017), Warrumbungle Shire comprises many townships, which accommodate around half of the shire's total population. Warrumbungle Shire residents value the access they have to a broad range of education, health, cultural, sporting and recreation facilities. Coonabarabran is the largest centre, providing regional retail, agricultural and business services. The remaining population lives in rural areas.

Warrumbungle Shire has a rich Aboriginal cultural heritage, influenced by the Gamilaraay people in the northern part of the shire, Wiradjuri people in the southern part as well as the nations of the Weilwan and Kawambarai (Werriri) on the western border of the shire. The shire hosts a variety of arts and cultural activities, festivals and events.

Major natural features include Coolah Tops National Park and Warrumbungle National Park, which contribute to the shire's character with wide open spaces and mountain landscapes. Residents value the close proximity to the national parks and large areas of forest and bushland. They also value the rural setting, peaceful amenity and clean air.

Siding Spring Observatory, located 25 kilometres from Coonabarabran, is the site of a number of internationally owned and operated optical telescopes. Both the observatory, national parks and associated discovery centre in the area are tourism assets to the shire. The observatory and Warrumbungle National Park were designated in 2016 as Australia's first International Dark Sky Park. International Dark Sky Parks are spaces that have exceptional starry nights and a nocturnal environment. Siding Springs Observatory is located on the eastern edge of the Warrumbungle National Park about 30 kilometres east of the proposal site and 27 kilometres west of Coonabarabran.

Warrumbungle Shire faces social challenges including population decline, ageing population, contracting workforce and skills shortage, and increasing cost of facilities and services.

### **Community infrastructure**

Baradine is the closest town within the LGA to the proposal site (about 10 kilometres south-east along the Gwabegar Road) with key community facilities including Baradine Multi Purpose Health Service, Baradine Central School, Baradine Memorial Swimming Pool, Baradine Town Oval. Additionally, many key community facilities are concentrated in Coonabarabran, which is about 40 kilometres further south-east from Baradine and 50 kilometres from the proposal site. Appendix C provides an overview of the community infrastructure located in Coonabarabran, which includes emergency services, community health services, TAFE NSW campus, local schools, a regional library, sport and recreation facilities and local parks.

Baradine Showground is located about one kilometre west of Baradine town centre and has been identified by Warrumbungle Shire Council as a preferred location for a temporary workforce accommodation facility. According to Social Assessment consultation with Baradine Showground Trust, there are four regular users of the showground each year. These are summarised below:

- the annual Baradine Agriculture Show held in March each year
- camp drafters who hold an event at the showground in August
- the local school who lease land at the southern end of the site to graze cattle for agricultural studies
- Camp Cypress, a not-for-profit tourist accommodation facility. It offers tourist accommodation and camping with four cabins, 20 powered camp sites and many unpowered camp sites (Camp Cypress, 2011). The camp also has a large hall space with kitchen and toilet facilities that can be hired for events and functions. Social Assessment consultation found that Camp Cypress is most often used by 'grey nomads' and other tourists who visit the Pilliga Forest for bird watching and hiking, and most visitors travel by caravan/campervan bring their caravans to stay at Camp Cypress. Other users throughout the year include an annual regional choir who stay in the cabins on site. Consultation indicates that visitors value the tranquillity of the area.

### **6.2.5 Narrabri LGA**

Narrabri LGA is located in the New England North West region, adjacent to the Namoi River and the Newell and Kamilaroi highways. The shire spans an area of around 13,000 square kilometres.

As discussed in section 6.1.3, the main town is Narrabri with other towns in the shire including Baan Baa, Bellata, Boggabri, Edgeroi, Gwabegar, Pilliga and Wee Waa.

Social Assessment consultations indicate that residents of surrounding LGAs rely on Narrabri for access to some employment and services.

Social Assessment consultation indicated there are several existing and proposed projects in Narrabri Shire which may be supported by Inland Rail. Narrabri Shire Council released the *Northern NSW Inland Port Prospectus* in September 2019, which outlines a business case for a freight and logistics terminal with access to Inland Rail, and an industrial park. According to consultation in 2019, the hub would attract new businesses and industries to Narrabri, bringing employment to the region. This includes the Narrabri Gas Project, with the application for approval recently submitted to the NSW Government. Social Assessment consultations indicate the potential inland port may benefit from gas produced by Santos, which could offer affordable energy to businesses in the industrial park.

### Population and demographic characteristics

In 2016, Narrabri LGA had a population of about 13,278 and experienced a slight increase of 0.3 per cent per annum between 2011 and 2016 (ABS (2017)). Communities in the LGA are generally characterised by:

- Indigenous people, comprising around 12.2 per cent of the total population compared to and NSW (2.9 per cent) but lower than the regional study area (15.3 per cent)
- an older population, with a median age of 40 years and around 17.6 per cent of the population aged 65 years or older compared to the regional study area (18.6 per cent) and NSW (16.3 per cent)
- a lower rate of people who require assistance at 4.4 per cent compared to the regional study area (5.8 per cent) and NSW (5.4 per cent)
- a higher household income at \$1,242 compared to \$998 in the regional study area, but lower than \$1,486 in NSW
- a slightly lower rate of unemployment at 6 per cent compared to the regional study area (6.3 per cent) and NSW (6.3 per cent)
- a higher proportion of people who volunteer at 24.6 per cent compared to NSW (18.1 per cent) but lower than the regional study area (22.2 per cent).

A summary of key population and demographic characteristics for the Narrabri LGA is provided in Table 6.9.

**Table 6.9 Narrabri LGA – key population and demographic characteristics, 2016**

Characteristic	Narrabri LGA	Regional study area*	NSW
Population (ERP 2018)	13,231	89,675	7,988,241
Population change 2011-2016 (%)	0.3	0.6	1.6
Population projection 2041	12,505	91,700	10,572,696
Indigenous (%)	12.2	15.3	2.9
Male (%)	49.9	49.2	49.3
Median age	40	40	38
Housing (total private dwellings) (number)	5,362	35,509	2,889,057
Owner occupied houses (%)	63.2	65.4	64.5
Rental houses (%)	31.9	30.0	31.8
Median household income (\$)	1,242	998	1,486
Completed Year 12 (%)	32.6	35.1	53.9
People who volunteer (%)	24.6	22.2	18.1

\*Note: Regional study area statistics have been calculated by aggregating the statistics for Narramine, Dubbo, Gilgandra, Coonamble, Warrumbungle and Narrabri LGAs.

Source: ABS (2017) 2016 Census of Population and Housing. General Community Profile. Catalogue number 2001.0; ABS (2018) ERP by LGA (ASGS 2018). Retrieved from [http://stat.data.abs.gov.au/Index.aspx?DataSetCode=ABS\\_ERP\\_LGA2018](http://stat.data.abs.gov.au/Index.aspx?DataSetCode=ABS_ERP_LGA2018); NSW Government (2019) Narrabri Shire Council 2019 NSW Population Projections. Retrieved from <https://www.planning.nsw.gov.au/Research-and-Demography/Population-projections/Projections>

### **Community values**

Narrabri is a regional centre which has a range of retail shops, restaurants, museums, tourist attractions and community infrastructure services. According to the *Narrabri Shire Community Strategic Plan 2017 – 2027* (Narrabri Shire Council, 2017), residents value the country lifestyle and associated amenities in Narrabri.

Narrabri is a highly productive agricultural district, and the region's economic development is strongly tied to the success of agricultural industries. The area primarily produces cotton, and there are also large wheat, beef and lamb agricultural industries.

A 2018 report by CSIRO shows that the Narrabri community value the level of access and quality of services and amenities in the area, social aspects of the community such as social interactions, the level of trust within the community, and the visual amenity of the local town.

The Kamilaroi people were the first inhabitants of Narrabri Shire. Known areas of cultural heritage significance in the LGA include scar trees on the Wee Waa/Narrabri Road, bora rings on Mt Kaputar, a sandstone baby washing area and sandstone rubbings in the Pilliga forests (Narrabri Shire, n.d). Mount Kaputar National Park and Pilliga National Park are both major natural features in the area, and attract tourists for their walking tracks, discovery centres and cycling. The Pilliga forests are located between Baradine and Narrabri and are crossed by the northern section of the proposal. Social Assessment consultation identified that the forests have places of Aboriginal culture and recreational significance such as the sandstone caves. Additionally, LALCs indicated there are some Aboriginal people that use parts of the Pilliga forests frequently. Other natural features of the area include the Nandewar Ranges and the Namoi River.

### **Community infrastructure and facilities**

The majority of key community infrastructure in Narrabri Shire is located in Narrabri. Appendix C provides an overview of the community infrastructure located in Narrabri, which includes emergency services, a district hospital, TAFE NSW campus, local schools, a showground, a library, a museum, sport and recreation facilities and local parks.

The Narrabri Dirt Bike Club is located at Newtown Park on the Kamilaroi Highway (Wee Waa Road) about two kilometres north-west of Narrabri. The eastern portion of the club site is intersected by the proposal site. The club facility includes two motocross tracks including a race track and a grass track as well as the Narrabri Speedway track.

Social Assessment consultation found that the site is owned by the NSW Department of Planning, Industry and Environment (Crown Lands) and is managed by Narrabri Shire Council, with the club leasing the site from Council. The club is a not-for-profit, volunteer run organisation, which hosts race days on the first Sunday of each month and grass track club days on four Saturdays from March to November each year. The club allows camping on site for some club day weekends with toilet and shower facilities available. The club currently has around 75 members; however, it was noted the membership had recently dropped which was attributed to the effects of the COVID-19 pandemic. Club members travel from across the regional study area and beyond (eg Armidale, Tamworth, Goondiwindi and Mudgee) to use the facility. The club recently undertook improvement works on the grass track.

#### **6.2.6 Dubbo LGA**

Dubbo LGA is located at the convergence of the Mitchell, Newell and the Golden highways, the Main Western Line and the Macquarie River. The LGA spans an area of around 7,500 square kilometres.



Dubbo is the regional city of the LGA and provides major health, education and community facilities and services that serve western NSW communities.<sup>4</sup>

### *Population and demographic characteristics*

In 2016, Dubbo Regional LGA had a population of about 50,094 and experienced a slight decline -0.4 per cent per annum between 2011 and 2016 (ABS (2017)). Communities in the LGA are generally characterised by:

- a similar Indigenous population (15.5 per cent) compared to the regional study area (15.3 per cent) but higher than NSW (2.9 per cent)
- a similar median age of 37 years to NSW (38 years)
- a slightly higher rate of people who require assistance at 5. per cent compared to NSW (5.4 per cent)
- a higher household income at \$1,271 compared to \$998 in the regional study area, but lower than \$1,486 in NSW
- a slightly lower rate of unemployment at 5.8 per cent compared to the regional study area (6.3 per cent) and NSW (6.3 per cent)
- a similar proportion of people who volunteer at 19.7 per cent compared to NSW (18.1 per cent) but lower than the regional study area (22.3 per cent).

A summary of key population and demographic characteristics for the Dubbo LGA is provided in Table 6.10.

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<sup>4</sup> Note that Dubbo Regional LGA has been included in the study area for this SEIA due to the role it plays in employment and service provision for communities throughout other LGAs in the study area.

**Table 6.10 Dubbo LGA – key population and demographic characteristics, 2016**

Characteristic	Dubbo Regional LGA	Regional study area*	NSW
Population (ERP 2018)	53,240	89,675	7,988,241
Population change 2011-2016 (%)	-0.4	0.6	1.6
Population projection 2041	58,777	91,700	10,572,696
Indigenous (%)	15.5	15.3	2.9
Male (%)	48.7	49.2	49.3
Median age	37	40	38
Housing (total private dwellings) (number)	19,674	35,509	2,889,057
Owner occupied houses (%)	65.0	65.4	64.5
Rental houses (%)	30.7	30.0	31.8
Median household income (\$)	1,271	998	1,486
Completed Year 12 (%)	38.1	35.1	53.9
People who volunteer (%)	19.7	22.2	18.1

\*Note: Regional study area statistics have been calculated by aggregating the statistics for Narromine, Dubbo, Gilgandra, Coonamble, Warrumbungle and Narrabri LGAs.  
Dubbo LGA statistics have been calculated by aggregating the statistics for the suburbs located in the LGA as there is no LGA profile for Dubbo in 2016 due to the amalgamation of the former Dubbo LGA and Wellington LGA.

Source: ABS (2017) 2016 Census of Population and Housing. General Community Profile. Catalogue number 2001.0; ABS (2018) ERP by LGA (ASGS 2018). Retrieved from [http://stat.data.abs.gov.au/Index.aspx?DataSetCode=ABS\\_ERP\\_LGA2018](http://stat.data.abs.gov.au/Index.aspx?DataSetCode=ABS_ERP_LGA2018); NSW Government (2019) Dubbo Regional Council 2019 NSW Population Projections. Retrieved from <https://www.planning.nsw.gov.au/Research-and-Demography/Population-projections/Projections>

### Community values

According to the *Dubbo Regional Council 2040 Community Strategic Plan (Dubbo Regional Council, 2018)*, residents and community benefit from Dubbo's geographical location at the centre of NSW and the junction of the Golden, Newell and Mitchell highways. Dubbo is connected to Sydney through a daily train service and to Sydney, Melbourne, Brisbane, Canberra and Newcastle via the Dubbo City Regional Airport. Social Assessment consultation indicated that Dubbo is becoming more accessible and attracting more people to the area. This population growth is expected to be facilitated by improved connections through the Dubbo City Regional Airport and the highway network.

As identified through Social Assessment consultation, many residents choose to live in Dubbo for its relaxed and affordable lifestyle with access to a range of facilities and services. Dubbo is a regional city that services western NSW communities providing access to health care, education, arts and cultural facilities, open space and recreation areas. Dubbo includes tourism attractions such as the Taronga Western Plains Zoo, Wellington Caves and the Old Dubbo Gaol, which attract significant numbers of both domestic and overseas tourists.

Dubbo's traditional owners are the Tubbagah People of the Wiradjuri Nation. Indigenous heritage is showcased at the Western Plains Cultural Centre, Terramungamine Reserve and murals near the Tracker Riley Cycleway.

Dubbo also hosts sporting, agriculture and social events for the region at various venues including Dubbo Showground, Dubbo Regional Theatre and Convention Centre, Caltex Park, DCL Park and Victoria Park.

Major open spaces in Dubbo include Elizabeth Park, which contains the Dubbo Regional Botanic Garden, Victoria Park, and Regand and Wiradjuri parks near the Macquarie River.

### **Community infrastructure**

Dubbo is where the majority of the LGA's community facilities are located. It also has regional and district level facilities that service the broader communities in western NSW such as a Charles Sturt University campus, TAFE Western campus, Dubbo Base Hospital, and Dubbo Regional Theatre and Convention Centre. An overview of key community infrastructure located in Dubbo is provided in Appendix C.

## **6.3 Industry and business**

Regional Development Australia identifies areas for regional development across Australia. These areas differ somewhat to the regions identified by the NSW Government in section 2.3. According to Regional Development Australia (2019), in 2017 the Gross Regional Product (GRP) of the Orana and Northern Inland regions<sup>5</sup> was \$8.091 billion and \$12.047 billion respectively. As shown in Table 6.11, Dubbo LGA generated the largest GRP of the LGAs in the study area at \$3.415 billion, followed by Narrabri at \$1.308 billion and Warrumbungle at \$0.45 billion. Similarly, tourism output was the highest in Dubbo, followed by Narrabri and Warrumbungle. These LGAs were also the largest employers (22,957, 6,553 and 3,108 jobs respectively).

Across the regional study area, the main occupations of workers included professionals, managers, machinery operators and drivers, and technicians and trades workers. The top industries in Narramine, Gilgandra, Coonamble and Warrumbungle LGAs by economic input included agriculture and real estate. According to the community strategic plans for each LGA (see section 2.4), agriculture remains an important contributor to their local economies, with the exception of Dubbo LGA. For the other LGAs, agricultural industries range from sheep, cattle, wool, cotton and cereal crop production. In Narramine and Narrabri LGAs, mining was also a large contributor to economic output. In Dubbo LGA, construction and manufacturing were the main industries. The regional area also has a significant forestry industry, including apiaries (JacobsGHD, 2020a).

According to *ARTC Economic Impact Assessment* (KPMG, 2020), 24.7 per cent of the local workforce in Narramine, Gilgandra, Coonamble, Warrumbungle and Narrabri LGAs are employed in the Agriculture, Forestry and Fishing industry. The largest proportion of all businesses in these LGAs are in the Agriculture, Forestry and Fishing industry (KPMG, 2020). Although agriculture remains a strong industry in the regional study area, the community strategic plans highlighted common challenges to the growth and diversification of the economies in the study area, including population decline, out-migration of youth, increasing costs of facilities and services, agricultural jobs decline, and skills shortage (section 6.4). Social Assessment consultation also found that the seasonal nature of agriculture combined with the prolonged drought conditions has affected local businesses and economies.

The community strategic plans for some LGAs identified economic opportunities related to the Inland Rail program, such as employment opportunities for residents and young people, and business and industry investment around transport and logistics hubs. This was supported by Social Assessment consultations which indicated that many stakeholders view Inland Rail as an opportunity to provide employment and economic benefits for the region. Social Assessment consultations also highlighted other growing industries in the study area, such as the renewable energy sector.

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<sup>5</sup> The Far West and Orana regions are identified by Regional Development Australia, and cover remote and regional parts of the west and central northern parts of NSW

Several LGAs in the study area have identified other growing and emerging industries. According to *Dubbo Regional Council 2040 Community Strategic Plan* (Dubbo Regional Council, 2018), the focus of the LGAs economy has shifted to the service, health and education sectors. This shift reflects its role as a regional city servicing western NSW communities.

Tourist attractions (discussed in section 6.2.6) also drive a visitor economy in Dubbo. In 2017, the LGA received 606,000 domestic day visitors, 555,000 domestic overnight visitors and 10,000 international visitors. With tourism contributing \$52.5 million to the Narrabri LGA economy in 2016, increasing the tourism industry is a key strategic direction provided in Narrabri's *Community Strategic Plan 2017-2027* (Narrabri Shire Council, 2017). Warrumbungle also has a strong tourism industry (equating to \$47.1 million), while Narromine, Gilgandra and Coonamble LGAs recognise future opportunities for their tourism industries.

Table 6.11 provides a summary of key economic indicators for the LGAs within the regional study area.

**Table 6.11 Key economic characteristics by LGA within the regional study area**

	Narromine	Dubbo	Gilgandra	Coonamble	Warrumbungle	Narrabri
Gross Regional Product (\$ billion)	\$0.381	\$3.415	\$0.233	\$0.208	\$0.45	\$1.308
Total jobs	2,339	22,957	1,578	1,416	3,108	6,553
Main occupations of workers (number employed)	Managers (617)	Professionals (4,255)	Managers (520)	Managers (420)	Managers (850)	Machinery operators and drivers (1,195)
	Professionals (298)	Technicians and trades workers (3,286)	Community and personal service workers (226)	Labourers (199)	Professionals (496)	Managers (1,113)
	Technicians and trades workers (289)	Clerical and administrative workers (3,116)	Professionals (221)	Professionals (191)	Labourers (452)	Technicians and trades workers (991)
Top industries by economic output (\$ million)	Agriculture, forestry and fishing (\$214.542)	Construction (\$1,057.487)	Agriculture, forestry and fishing (\$159.412)	Agriculture, forestry and fishing (\$137.583)	Agriculture, forestry and fishing (\$261.233)	Mining (\$1,138.053)
	Mining (\$178.390)	Manufacturing (\$890.039)	Rental, hiring and real estate (\$41.588)	Rental, hiring and real estate (\$37.117)	Rental, hiring and real estate (\$91.713)	Agriculture, forestry and fishing (\$353.665)
	Rental, hiring and real estate (\$69.366)	Rental, hiring and real estate (\$654.368)	Public administration and safety (\$26.828)	Construction (\$29.426)	Construction (\$63.228)	Manufacturing (\$194.958)
Tourism output (\$ million)	\$14.184	\$289.507	\$19.251	\$8.421	\$46.972	\$62.453

Source: Regional Development Australia (2019)



### 6.3.1 Local and Indigenous businesses

This section provides an overview of the availability and capacity of local and Indigenous businesses located in the study area relevant to the opportunities presented by construction and operation of the proposal. This is based on the outcomes of Social Assessment consultations with stakeholders including councils, chambers of commerce and LALCs (see section 4).

Social Assessment consultation indicated that there are a number of local businesses in the study area that would have the capacity or could prepare for procurement opportunities available during construction of the proposal. Overall, stakeholders indicated the types of businesses available in the region with capacity and resources for procurement opportunities include:

- bus operators
- traffic controllers
- steel supplies
- concrete works (ie mixing and casting)
- bulk haulage
- machinery hire
- catering
- specialty food retailers.

Most stakeholders did not provide specific details about individual businesses and their capacity during Social Assessment consultations. While some councils have local business directories, local chambers of commerce noted that a significant proportion of local businesses are not listed online (ie do not have a website or social media presence) which is a barrier when it comes to identifying relevant businesses for procurement. A number of other barriers for local businesses to pursue procurement opportunities were identified including:

- a lack of dedicated administration resources to complete required paperwork
- additional requirements for sub-contractors to complete primary contractor specific training (on top of tickets) at the small business/individual's cost
- uncertainty in the consistency of work
- travel requirements
- insufficient notice or information provided regarding required training and tickets.

Local chambers of commerce indicated that they would be willing to work with Inland Rail and the primary contractor to identify specific local businesses that could be involved in the construction activities. They also indicated they would be available to assist local businesses to prepare for the available opportunities.

As discussed in Appendix C of the EIS, ARTC has established a partnership with the Australasian Railway Association (further discussed in section 6.4). One of the key focus areas of the partnership is business participation and capability building. Through this partnership, small to medium enterprises in regions along the proposal site will receive advice on integrating into major project supply chains. They will also be provided with opportunities to build capability and supply chain readiness to meet requirements of major projects. This program is in development in 2020 (ARTC, n.d.)

LALCs indicated there are few Indigenous businesses in the region that would have the relevant skills or capacity for procurement opportunities provided by Inland Rail. Social Assessment consultation indicated that while there would be Indigenous people with relevant skills who would be interested in participating in procurement opportunities with the proposal, they may not be registered as Indigenous businesses with Supply Nation or be able to meet the procurement requirements of the proposal. Some LALCs suggested these individuals could be facilitated through other organisations and be supported to increase their readiness and capacity for the procurement requirements.

Indigenous businesses that were identified during Social Assessment consultation which would likely have the capacity to participate in the proposal include:

- Newbold – bulk haulage business located in Coonamble
- Castlereagh Hire – machinery hire business located in Coonamble.

## **6.4 Employment, workforce and training**

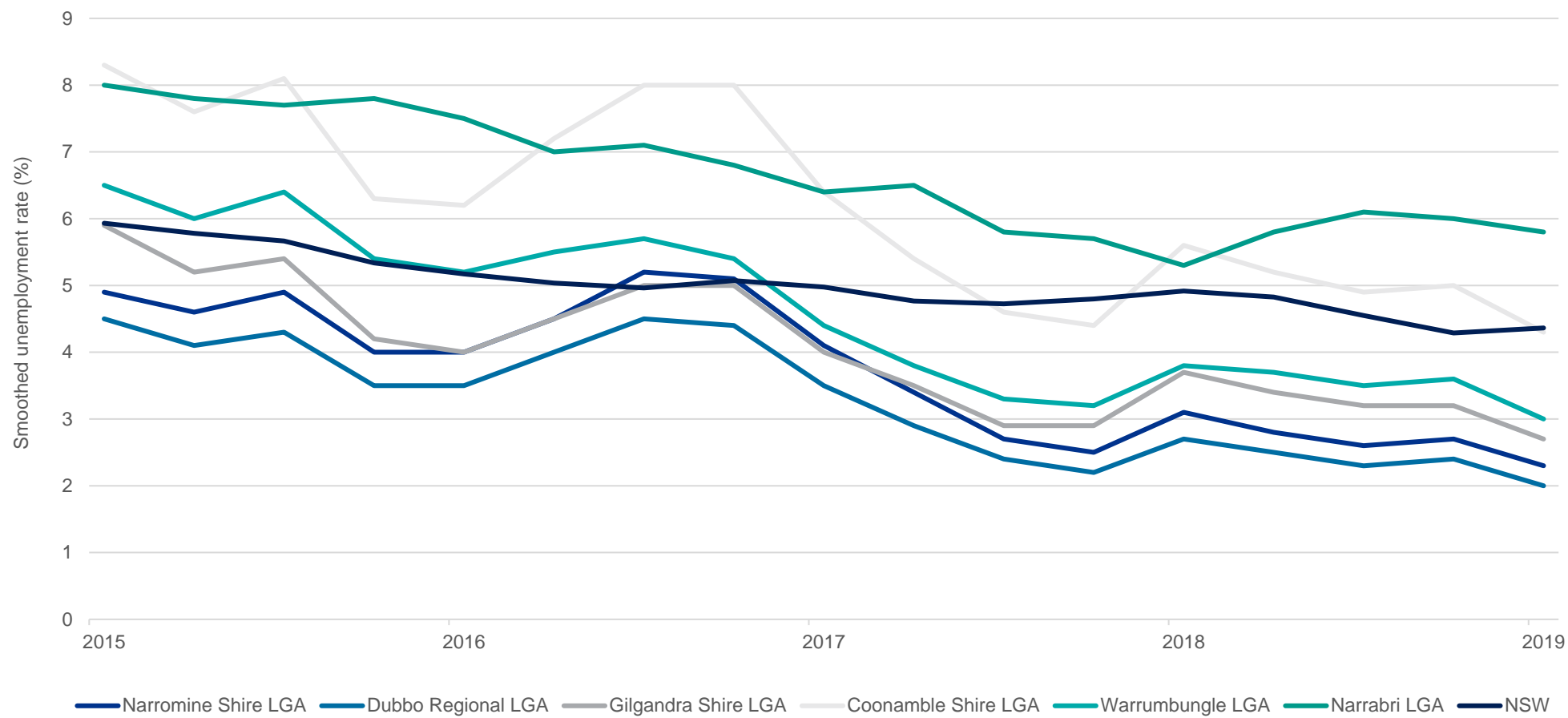
This section provides an overview of available employment and workforce data for the study area. This includes discussion about unemployment rates, availability of skilled workforce, underemployed groups, skills, and available training providers and programs. It should be noted that this report was prepared during the economic shock of the COVID-19 pandemic, which would not be accurately reflected in the employment data.

### **6.4.1 Overview of unemployment rates**

Figure 6.6 shows the unemployment rates for the LGAs in the study area compared to NSW between 2014 and 2019. In the last four years, Gilgandra, Narromine and Dubbo LGAs had unemployment rates consistently below the state average. However, these low levels of official unemployment may not reflect a number of local conditions, particularly in Gilgandra and Narromine, such as:

- under-employment amongst those who are self-employed within the agricultural sector
- the out-migration of transient agricultural workforce (eg shearers, pickers, drivers) in search of employment
- the out-migration of youth from rural areas to regional centres and cities in search of employment.

Figure 6.6 shows that Narrabri and Coonamble LGAs generally experienced greater levels of unemployment than NSW over the five-year period. Social Assessment consultation found that some LGAs in the study area (eg Warrumbungle and Coonamble) struggle to fill available positions due to out-migration of youth and skilled workers seeking higher paid employment opportunities. As discussed in *ARTC Inland Rail Narromine to Narrabri Economic Impact Assessment* (KPMG, 2020) the labour force participation rate in Coonamble LGA was 60.3 per cent, while Warrumbungle LGA was 61.2 per cent. Both LGAs were lower compared to the regional average (77 per cent in Far West and Orana Region and 78.1 per cent in New England and North West Region) and state average (78.4 per cent).



Source: Australian Government (2019c) Small Area Labour Markets Publication

**Figure 6.6 Unemployment rate (%) quarterly trends over five years**

## 6.4.2 Under-employed populations

This section presents a review of employment data to identify potentially under-employed populations in the region. This includes females, young people and Indigenous people. This is important to understand as these sectors of the community are often the focus of government employment targets (section 2). The review focused on the latest data available at the time of writing this report, recognising that unemployment data can be volatile. The most up-to-date data available at the time of this report is released at the Statistical Area Level 4 (SA4) level, the largest sub-state region available in the 2016 Census (ABS, 2016). The relevant SA4 regions for the proposal are the Far West and Orana Region and New England and North West Region.

### Sex

Unemployment in the Far West and Orana Region<sup>6</sup> and New England and North West Region<sup>7</sup> has been characterised by volatility for the last decade (Department of Employment, 2015), which increases when disaggregating employment data into smaller populations, resulting in sometimes considerable changes in unemployment rates.

The unemployment rate for males and females in the Far West and Orana Region (Figure 6.7) experiences regular fluctuations each year, with female unemployment often dropping to zero, typically between December and April. Male unemployment is typically higher in the Far West and Orana region than female unemployment. In the last twelve months, male unemployment peaked at 9.2 per cent in May 2019, while female unemployment reduced to zero.



Source: ABS (2020) 6291.0.55.001 – RM1 – Labour force status by Age, Labour market region (ASGS) and Sex, October 1998 onwards

**Figure 6.7 Change in unemployment rates for male and females – Far West and Orana**

Similar to the Orana and Far West Region, male unemployment is typically higher in the New England North West Region than female unemployment. In the last twelve months, male unemployment peaked at 11 per cent in February 2020, while female unemployment was 8.6 per cent. Figure 6.8 shows the female unemployment rate tends to drop typically in December, April and August. It is worth noting that female unemployment is typically lower than male unemployment in Australia, potentially due to lower levels of female workforce participation (Department of Jobs and Small Business, 2018).

<sup>6</sup> The Far West and Orana regions are identified by Regional Development Australia, and cover remote and regional parts of the west and central northern parts of NSW

<sup>7</sup> The New England and North West regions are identified by Regional Development Australia and cover remote and regional parts of the Northern Tablelands and North West Slopes parts of NSW



Source: ABS (2020) 6291.0.55.001 – RM1 – Labour force status by Age, Labour market region (ASGS) and Sex, October 1998 onwards

**Figure 6.8 Change in unemployment rates for male and females – New England and North West**

Table 6.12 details the current labour force and five year change in labour force by sex in the Far West and Orana Region and New England and North West region. The size of the labour force in the Far West and Orana Region has expanded, equating to an increase in 16 per cent in males and 19.2 per cent in females between April 2015 and April 2020. While the labour force in the New England and North West region has seen a 1.5 per cent increase in males and a 5.9 per cent reduction in females. An increase in workforce size alongside a reduction in unemployment indicates an increase in available jobs. Contrastingly, a reduction in the workforce size alongside an increase in unemployment indicates that there has been a reduction in jobs available (Biddle, 2010).

**Table 6.12 Labour force – Far West and Orana – sex (August 2019)**

Sex	Labour force	Labour force change April 2015 – April 2020
<b>Far West and Orana Region</b>		
Female	25,075	19.2%
Male	27,975	16.0%
<b>New England and North West Region</b>		
Female	40,360	-5.9%
Male	49,179	1.5%

Source: ABS (2020) 6291.0.55.001 – RM1 – Labour force status by Age, Labour market region (ASGS) and Sex, October 1998 onwards

A review of local government level data collected during the 2016 Census (Table 6.13) shows that unemployment was generally on par between the sexes in each LGA, albeit at a single point in time. This data reinforces that there are areas within the regional study area with higher unemployment overall, including Warrumbungle (male: 7 per cent, female: 5.8 per cent), Coonamble (male: 7 per cent, female: 6 per cent) and Narromine (male: 6.6 per cent, female: 5.6 per cent) compared to NSW (male: 5.7 per cent, female: 5.6 per cent). These areas also had higher proportions of people who did not state their employment status. This indicates that the unemployment rate may be higher. The last two years of drought may have impacted unemployment rates across LGAs in the regional study area, in particular for Warrumbungle, Narromine and Coonamble, which all have large proportions of the population employed in agricultural industries (see section 6.3).



**Table 6.13 Employment data – local government areas – sex (2016)**

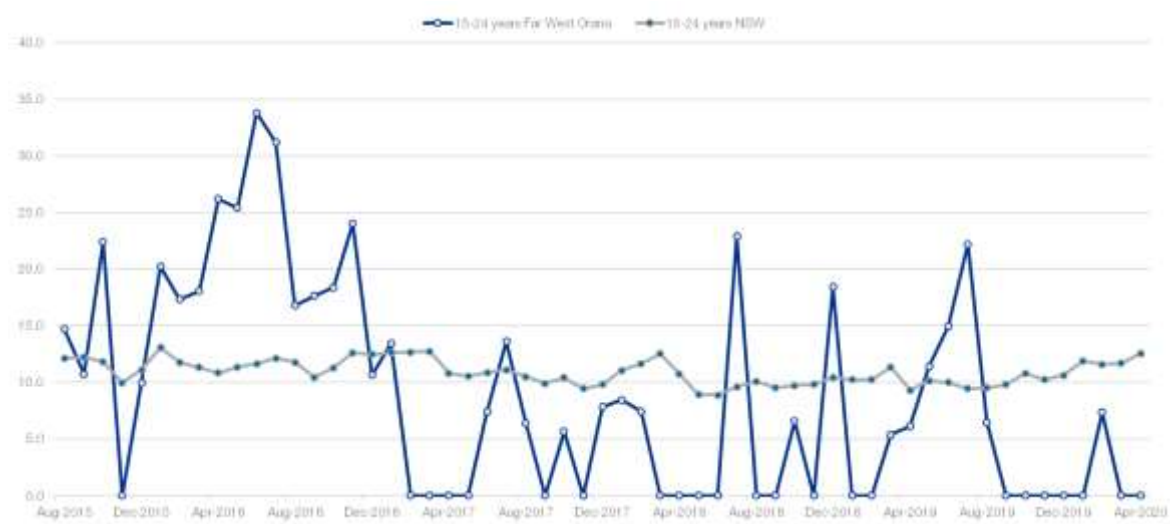
Area	Sex (%)	Employed (%)	Unemployed (%)	Not stated (%)
Coonamble	Male	68.6	7.0	24.4
	Female	68.4	6.0	25.6
Gilgandra	Male	81.3	5.3	13.3
	Female	82.2	4	13.8
Narromine	Male	79	6.6	14.4
	Female	77.8	5.6	16.6
Narrabri	Male	80.1	5.3	14.6
	Female	77.5	4.8	17.7
Warrumbungle	Male	74.5	7	18.4
	Female	73.9	5.8	20.3
Dubbo	Male	83.1	5.4	11.5
	Female	82.7	4.9	12.4
NSW	Male	84.8	5.7	9.5
	Female	83.9	5.6	10.5

Source: ABS (2017) 2016 Census of Population and Housing. General Community Profile. Catalogue number 2001.0

### *Young people*

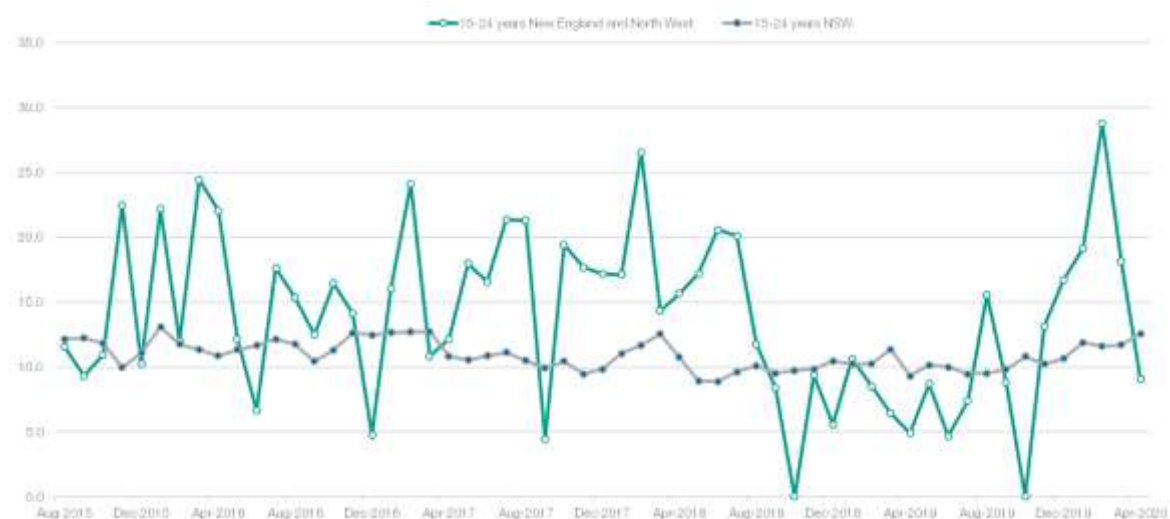
As discussed in sections 2.4 and 4, a key challenge in the regions is young people leaving to seek employment, education and training opportunities. Some stakeholders noted during Social Assessment consultation that young people who leave to pursue education do not return to the region as they seek higher paid employment opportunities in metropolitan areas. Some stakeholders also indicated that when young people do return to the region they often cannot find work, particularly in smaller towns.

As shown in Figure 6.9 and Figure 6.10, youth unemployment (15 to 24 year olds) has been variable in the regions over the past five years, reaching a peak of 33.8 per cent in June 2016 and falling to zero in February 2017 in the Far West and Orana Region. The New England and North West Region was at zero per cent in October 2019 and reached a peak of 28.8 per cent in February 2020. Although the troughs are lower than the NSW youth unemployment rate, the peaks are higher than the NSW rate. These frequent fluctuations may be related to young people gaining employment during school and university holidays and seasonality of work in the region.



Source: ABS (2019) 6291.0.55.001 – RM1 – Labour force status by Age, Labour market region (ASGS) and Sex, October 1998 onwards

**Figure 6.9 Change in unemployment rates for 15 to 24 year olds – Far West and Orana**



Source: ABS (2019) 6291.0.55.001 – RM1 – Labour force status by Age, Labour market region (ASGS) and Sex, October 1998 onwards

**Figure 6.10 Change in unemployment rates for 15 to 24 year olds – New England and North West**

Table 6.14 shows that the youth labour force grew by 42.7 per cent in the Orana and Far West Region and 27 per cent in the New England and North West Region in the five years between April 2015 and April 2020. However, this large ‘growth’ is likely reflective of the volatility of labour force data in the regions, which experience expansions and contractions on a month by month basis potentially due to the seasonality of work associated with agriculture which is one of the most prominent industry in regions. For example, the 15 to 24 year old labour force in the Orana and Far West Region expanded from 7,462 in July 2019 to 12,636 in August 2019. Similarly, the same cohort in the New England and North West Region reduced from 14,447 in February 2020 to 9,574 in April 2020.

**Table 6.14 Employment data – Far West and Orana and new England and North West – young people (April 2020)**

Area	Unemployment rate	Labour force (15-24 years)	Labour force change April 2015 and April 2020
Far West and Orana Region	0.0	4,348	42.7%
New England and North West Region	9.1	9,574	27.0%

Source: ABS (2019) 6291.0.55.001 – RM1 – Labour force status by Age, Labour market region (ASGS) and Sex, October 1998 onwards

A review of local government level data from the 2016 Census (Table 6.15) shows that youth unemployment was higher in Coonamble (18.3 per cent), Narromine (14.4 per cent) and Warrumbungle (15.8 per cent). These areas also had higher proportions of people who did not state their employment status. This indicates that the unemployment rate may be higher than indicated in the 2016 Census data. *ARTC Economic Impact Assessment* (KPMG, 2020) found that there are high unemployment and low labour force participation rates for youth in the Far West and Orana and New England and North West Regions. This indicates that there may be some capacity in the youth labour force, and current job seekers may have the required skills, or may have the ability to be upskilled.

**Table 6.15 Employment data – young people (2016)**

	Employed (%)	Unemployed (%)	Not stated (%)
Coonamble	62.6	18.3	19.1
Gilgandra	79.3	9.5	11.3
Narrabri	73.4	11.7	14.9
Narrromine	70.6	14.4	14.9
Dubbo	78.8	11.4	9.8
Warrumbungle	66	15.8	18.2
NSW	78.8	12.4	8.8

Source: ABS (2017) 2016 Census of Population and Housing. General Community Profile. Catalogue number 2001.0

### **Indigenous people**

This section presents a review of LGA level data for Indigenous employment from the 2016 Census, which was the most recent data available at the time of preparation of this report.

Table 6.16 shows that Indigenous people throughout the study area had much higher reported rates of unemployment than non-Indigenous people. The proportion of Indigenous persons who stated they were unemployed was significantly higher in Coonamble (25.7 per cent), Warrumbungle (26.2 per cent) and Gilgandra (23.4 per cent). A larger proportion of Indigenous peoples in all areas did not state their employment status compared to non-Indigenous peoples, which was also highest in Coonamble (8.9 per cent), Gilgandra (7.1 per cent), and Warrumbungle (5.2 per cent). This means the unemployment rates in these LGAs is likely higher for Indigenous persons than reported.

**Table 6.16 Employment data – Indigenous people (2016)**

Area	Indigenous Status	Employed (%)	Unemployed (%)	Not stated (%)
Coonamble	Indigenous	64.5	25.7	8.9
	Non-Indigenous	93	3.2	3.8
	Not Stated	5	0	95
Gulgandra	Indigenous	69.5	23.4	7.1
	Non-Indigenous	93.1	3.6	3.3
	Not Stated	8.2	0	91.8
Narrabri	Indigenous	76.3	16.7	7.1
	Non-Indigenous	92.9	4.5	2.7
	Not Stated	6.2	0.9	92.9
Narromine	Indigenous	79.7	15.7	4.6
	Non-Indigenous	92.4	5.4	2.2
	Not Stated	3.9	0.6	95.5
Dubbo	Indigenous	79.5	16.7	3.8
	Non-Indigenous	94.1	0.6	3.2
	Not Stated	6.4	0.6	93
Warrumbungle	Indigenous	68.3	26.2	5.2
	Non-Indigenous	90.9	5.9	3.2
	Not Stated	3.9	0.5	95.6
NSW	Indigenous	80.7	14.6	4.7
	Non-Indigenous	92.1	5.9	1.9
	Not Stated	5.1	0.5	94.4

Source: ABS (2017) 2016 Census of Population and Housing. General Community Profile. Catalogue number 2001.0

Consultation with LALCs (section 5.2.5) identified there is a trend of intergenerational unemployment across Aboriginal communities in the study area. In some cases, this is a result of limited employment opportunities, particularly in smaller towns in the region (eg Gulgambone, Baradine and Gulgandra). Other barriers to Aboriginal employment in the study area identified by stakeholders include:

- limited access to phones, credit cards and internet
- literacy issues
- limited car ownership or cost of public transport, restricting access to training providers
- unclear on requirements
- drug and alcohol use.

Social Assessment consultation indicated there is a significant proportion of Indigenous people across the study area who are willing to work, but would require support to obtain the necessary training and certifications required for employment opportunities.

### 6.4.3 Availability of skilled workforce

This section considers the likely availability of workforce within the study area with relevant skills for the construction and operation of the proposal. It is a high level overview undertaken to inform this Social Assessment. It considers general skills shortages in the regional study area and skills shortages that are likely to relate to the proposal's workforce required to construct the proposal.

The *ARTC Economic Impact Assessment* (KPMG, 2020) reports that there are residents in the region with the relevant skills to support construction of the proposal. In 2016, in the Far West and Orana Region, there were 1,854 workers employed in Construction Services and 362 workers in Heavy and Civil Engineering. In the New England and North West Region, there were 3,140 workers employed in Construction Services and 457 workers in Heavy and Civil Engineering Construction. The study reports there may be some capacity in the skilled labour force in the region, with 20,300 unemployed persons (11 per cent) across the Far West and Orana Region and New England and North West Region reporting their last job was in construction. However Census data for the LGAs in the study area shows that, in 2016, all residents in the labour force with relevant skills (such as labourers, technicians and trades workers, and machinery operators) were employed. This demonstrates that those who are unemployed may not already have the required skills to gain employment on the construction program.

Skills shortage is a recognised challenge for the region, which has been attributed to population decline along with socio-economic disadvantage (RDA Northern Inland NSW, 2018; Western Research Institute, 2018). With a large pipeline of significant infrastructure and construction projects planned for the region, some industry sectors are likely to suffer from a shortage of skilled staff over the next few years unless strategies are put in place to support economic growth (Western Research Institute, 2018).

The Australian Department of Education, Skills and Employment undertakes skill shortage research that is aimed at providing information about employers' ability to recruit the skilled workers they need. The research is based on a survey of employers who have recently advertised, and includes qualitative and quantitative information of employers' recruitment experience (Department of Employment, 2017).

Skill shortage estimates are published at the state level, with statistics disaggregated into metropolitan and regional data. For NSW, construction trade workers are a recognised skill shortage. The majority (about 70 per cent) of employers considered applicants to be unsuitably skilled for the advertised vacancy (Australian Government, 2019a). The shortage appears to be greater in regional NSW, where only 32 per cent of vacancies were filled in the surveyed period, compared to 40 per cent in metropolitan NSW (Australian Government, 2019a). Similarly, 83 per cent of applicants for engineering trades roles in NSW were deemed unsuitable by employers (Australian Government, 2019b). The skills shortage for engineering trades appears to be greater in metropolitan NSW, where 32 per cent of metropolitan vacancies were filled compared to 46 per cent in regional NSW.

More broadly, the Australasian Railway Association has noted that there is a national skills shortage for the rail industry, which is expected to rise over the next five years, due to construction of Inland Rail alongside other rail projects (Australasian Railway Association & BIS Oxford Economics, 2018). In NSW, demand for construction and manufacturing employees in the rail industry has been forecast to grow from 18,300 in 2018 to 45,700 in 2024. However, demand is expected to fall again after 2024 (Australasian Railway Association & BIS Oxford Economics, 2018).



According to a survey of rail stakeholders by Australian Industry Standards, 90 per cent of employers reported a skill shortage in early 2018 (Australian Industry Standards, 2018). Operations and maintenance worker demand is forecast to increase from 8,800 in 2018 to 10,800 by 2027. Based on current forecasts of the demand, and the expected exit of an ageing workforce, the forecast workforce gap for rail operations and maintenance is around 4,000 in NSW (Australasian Railway Association & BIS Oxford Economics, 2018).

These findings are confirmed by the *Industry Skills and Opportunities: Dubbo, Gilgandra and Narromine* study (Western Research Institute, 2018) commissioned by these councils and the NSW Department of Premier and Cabinet. As shown in Figure 6.11, the only skill area not identified as currently being in shortage was semi-skilled workers.

SKILL	CURRENT SKILL SHORTAGE	STRONG IDENTIFIED FUTURE DEMAND
 Diesel Mechanics	✓	✓
 Electrician	✓	✓
 Engineers	✓	✓
 Metal Fabrication Trades	✓	✓
 Plant Operators	✓	✓
 Semi-Skilled Workers		✓
 Truck Drivers	✓	✓
 Site Supervisors and Foremen	✓	
 Contract Management Capacity	✓	
 Joinery and Shopfitting	✓	
 Tilers and Bricklayers	✓	

Source: Western Research Institute, 2018

**Figure 6.11 Overview of current skills shortage and future demand for Dubbo, Gilgandra and Narromine LGAs**

According to Social Assessment consultation, these councils have partnered to develop an employment strategy to encourage more trades workers to move to the region, and promote the training and employment opportunities that are available to young people.

Other programs and initiatives in the study area focused on addressing the skills shortage are discussed below:

- Social Assessment consultation identified that Dubbo Council is working with the NSW Government to market the workforce and business opportunities available in the LGA.
- RDA Orana has signed the Orana Designated Migration Agreement which is a five year labour agreement with the Australian Government. It provides employers with a specific tool to sponsor skilled overseas workers in specified industries that are currently experiencing a skill and labour shortage. It includes a range of professional, technical and trade occupations that are eligible for sponsorship due to the regional skills shortage (Regional Development Australia Orana NSW, 2019).

Social Assessment consultation also indicated that while there has been an increase in migrant workers moving to the study area for construction projects, there have been some challenges in housing the transient workforce.

#### **6.4.4 Training providers and programs**

There are a range of training providers and programs available in the region which could assist the local workforce to gain the necessary skills and increase job readiness for the employment opportunities available during construction and operation of the proposal. Appendix D presents an indicative list of the training providers for most LGAs in the study area, identified through a desktop review and Social Assessment consultation. Appendix D shows that there is a TAFE NSW campus in most LGAs. Most training providers in the study area offer courses relevant to construction, such as white cards, blue cards, certifications and first aid training. Some training providers are targeted to Indigenous communities, and people with disability.

According to Social Assessment consultation many residents travel to larger population centres to access training services, with stakeholders noting the larger organisations in these centres provide more variety of training courses compared to organisation in smaller towns.

##### ***Local training programs***

Social Assessment consultation also found there are a range of programs in the study area which would be relevant to the proposal. These are discussed below:

- The Narrabri LALC works with local industry to help local Indigenous people find work placements. They also provide support such as transport to access jobs, Pegasus training and drug and alcohol testing.
- Narrabri Council has been working with the Department of Premier and Cabinet on an initiative to facilitated upskilling of the local and Aboriginal workforce to ensure they are work ready for future large projects in the region.
- Social Assessment consultation indicates that local chambers of commerce are willing to connect Inland Rail to local Registered Training Organisations (RTOs) and Australian Testing Services (ATS) Rail providers, including providing a comprehensive list of training providers in the region.

- RDA Northern Inland have received funding for a Regional Employment Trials Program which provides an employment facilitator to work with local stakeholders (eg councils, employers, training organisations, employment service providers) to provide tailored employment initiatives to meet local needs.
- Gilgandra Shire Council has received NSW Government funding to assist agricultural workers with gaining civil construction qualifications.

The outcomes of these programs, as they relate to the proposal, include the development of skills in the local (including Aboriginal) workforce that would assist people access the employment opportunities that the Inland Rail program would provide (see section 7.2).

### ***Inland Rail Skills Academy***

In addition to these local providers and programs, the Inland Rail Skills Academy was launched in August 2019 by ARTC to help create opportunities for education, training, skills development and employment for communities along the proposal site. The Inland Rail Skills Academy partners with Councils, State Governments, RTOs, employment service agencies, Local Aboriginal Land Councils and others to facilitate training for local residents interested in working on Inland Rail projects. This training is offered prior to the principal construction contract award.

In terms of desired outcomes, the aims of Inland Rail Skills Academy are to:

- increase the number of skilled local people eligible for work on Inland Rail
- increase school student awareness and capability
- create opportunities for local businesses to participate in new supply chains
- equip Inland Rail employees with world-class skills.

Priority training areas include civil construction competencies, White Card accreditation and understanding 'work readiness' for major infrastructure projects. Requisite rail competency training is also offered to ensure compliance with industry standards. Participants who successfully complete these training components are invited to 'meet the contractor' sessions when the principal contractor is appointed. These events provide participants with information on work opportunities available and how to access them. They also profile local skills to the contractor and its supply chain. The Inland Rail Skills Academy also provides information about skills required on Inland Rail Projects to interested stakeholders to inform other training provided in the region."

The Inland Rail Skills Academy also includes the following programs:

- Undergraduate scholarships – a total of 20 scholarships will be available for students commencing their studies at University of Southern Queensland, Charles Sturt University and La Trobe University in 2020 and 2021. These are valued at up to \$20,000 or \$5,000 for every year of study.
- Science, technology, education and maths (STEM) education – primary and secondary schools will participate in a range of workshops which aim to inspire career paths in this sector, and professional development will be offered to teachers to build their skills in teaching STEM subjects.
- Developing Inland Rail employee capacity – supporting ARTC employees with skills development through training programs.

- ARTC and the Australasian Railway Association partnership – there are two key focus areas of the partnership:
  - Boosting skills training into rail construction, operation and rail maintenance – young people and interested community members will be supported into apprenticeships and traineeships and/or assisted to gain industry accreditation which could lead to employment on Inland Rail projects or operational rail.
  - Business participation and capability building (discussed in section 6.3).

These programs are all in development in 2020 (ARTC, n.d.).

The various programs in the region, and those involved via the Inland Rail Skills Academy, may help to upskill regional residents to gain employment with ARTC during construction and operation of the proposal.

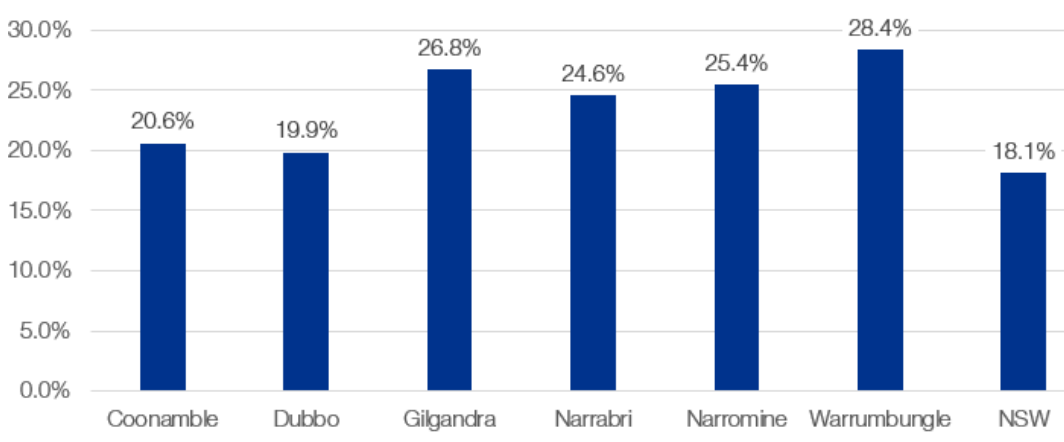
## 6.5 Community wellbeing

### 6.5.1 Social capital

Social capital is a broad concept that is often used to understand the network of social connections within a community that can be used to support each other. High levels of social capital are often indicative of the sustainability of a community, of people's desire to remain living there, and of their ability to respond to crises and challenges (Onyx and Leonard, 2010).

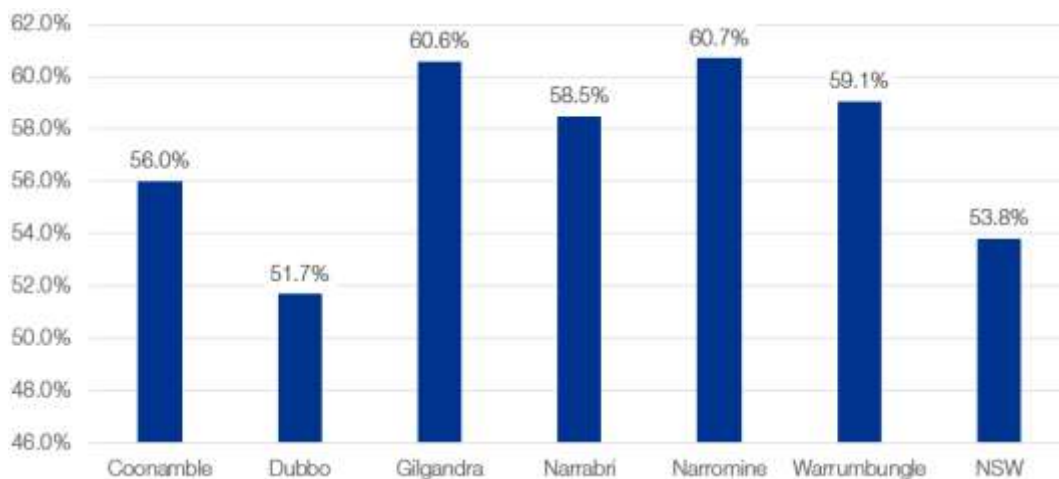
Indicators of social capital used for this Social Assessment include those related to a community's ability to act collaboratively, such as volunteering rates, and the potential for developing long term social ties, through the length of residence in the community. Similarly, feelings of trust and safety, alongside feeling able to gain assistance in a time of need are also considered to be indicators of social capital (Bulleen and Onyx, 2005).

Figure 6.12 shows volunteering rates across the study area. Overall, there are higher rates of volunteerism compared to the State average, particularly in Warrumbungle, Gilgandra, Narrabri and Narramine LGAs. Regardless of the motivations or causes of increased volunteering rates (such as lower governmental provision of services eg fire-fighting), the higher rates in the study area are likely to increase the ties and relationships between community members, and presumably increase the social fabric of communities. Similarly, as shown in Figure 6.13, all LGAs except Dubbo have higher proportions of the population who have lived at the same address for more than five years than the State average (53.8 per cent).



Source: ABS (2017) 2016 Census of Population and Housing. General Community Profile. Catalogue number 2001.0

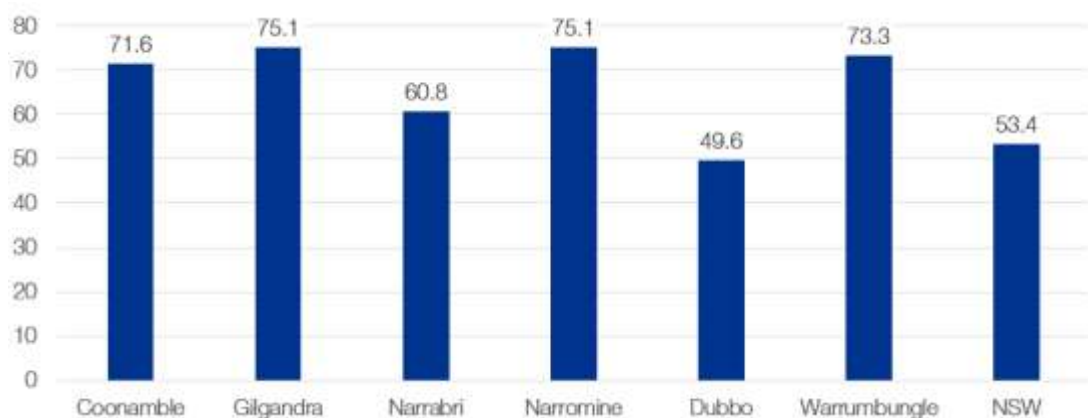
**Figure 6.12 Volunteering rates**



Source: ABS (2017) 2016 Census of Population and Housing. General Community Profile. Catalogue number 2001.0

**Figure 6.13 Lived at same address five years ago**

Figure 6.14 shows modelled estimates for the study area from a 2014 national survey about feelings of safety. The findings indicate that overall, most people aged over 18 years in the study area felt safe or very safe to walk alone in their local area after dark, compared to the NSW proportion as a whole. This suggests that perceptions of community safety in study area overall are better than average (PHIDU Torrens University Australia, 2019a).



Source: PHIDU (2019b) Social Health Atlases of Australia: Local Government Areas

**Figure 6.14 Estimated number of people aged 18 years and over who felt very safe/safe walking alone in local area after dark**

Table D-2 in Appendix B shows the offence rate per 100,000 persons for selected offences between 2014 to 2018. The data shows that crime rates in the regional study area are consistently above that of the state as a whole. This is particularly elevated for the Coonamble LGA. Despite this, the proportion of people who feel safe after dark in Coonamble is significantly higher than the State. This demonstrates that perception of safety is more likely to be driven by other social characteristics, such as length of residence in the community and other social ties, rather than incidence of crime.

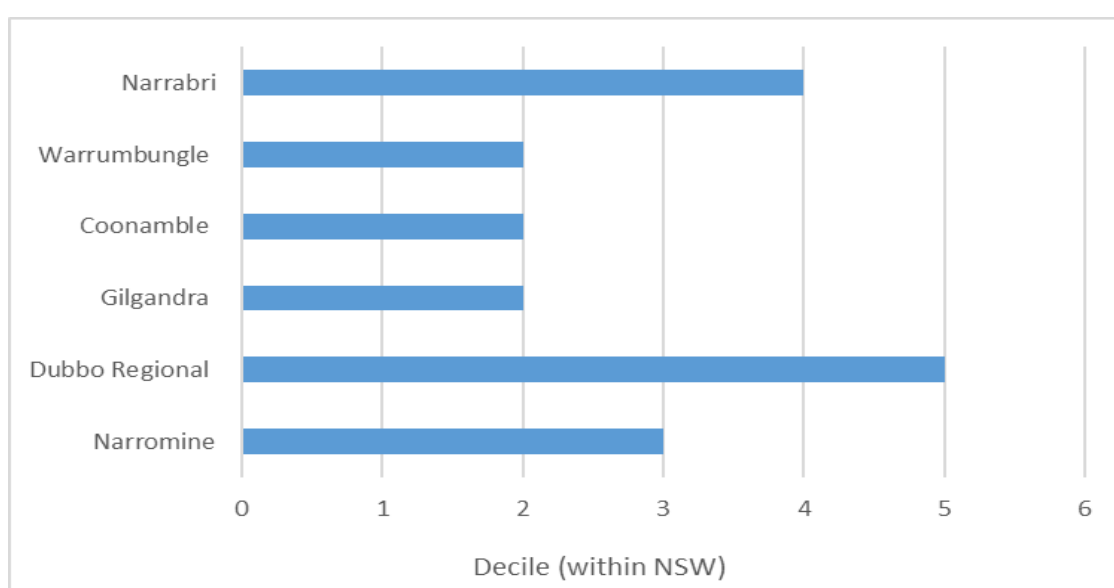


### 6.5.2 Socio-economic advantage and disadvantage

Socio-economic vulnerability, as defined by the ABS Index of Relative Socio-Economic Advantage and Disadvantage (IRSAD), indicates the level of relative socio-economic advantage and disadvantage in a specified area. Socio-economic advantage and disadvantage are defined broadly by the IRSAD in terms of people's access to material and social resources and their ability to participate in society (ABS, 2018). To capture this broad definition, the IRSAD includes a range of data points, including income, education, employment, occupation, and housing.

The IRSAD divides a population into 10 equal groups. The lowest scoring 10 per cent of these groups are given a decile number of one, which indicates the highest level of disadvantage, and the highest scoring 10 per cent of areas are given a decile of 10, which indicates the highest level of advantage.

As shown in Figure 6.15, there are higher levels of disadvantage in the regional study area compared to NSW overall, in particular Gilgandra, Coonamble and Warrumbungle LGAs which all have decile numbers of 2 out of 10.



Source: ABS (2018) 2033.0.55.001 – Census of Population and Housing: Socio-Economic Indexes for Areas (SEIFA), Australia, 2016

**Figure 6.15 Index of Relative Socio-Economic Advantage and Disadvantage (IRSAD), 2016**

### 6.5.3 Health providers

A focus on primary referral pathways is necessary as it recognises that local hospitals throughout much of rural Australia refer on major and complex health incidents to larger hospitals with greater resources.

The majority of LGAs in the regional study area (Dubbo, Narromine, Gilgandra, Coonamble and Warrumbungle) are located in the Western NSW Primary Health Network. People requiring higher levels of generalist or specialist care than available locally are generally referred to health services at Dubbo or Orange. Coonamble, Warrumbungle and Gilgandra LGAs do not have hospitals and rely on community-level services. A complete list of hospital and counselling and mental health services is provided in Appendix C.

Narrabri is located in Hunter New England Central Coast Primary Health Network. People requiring services not available at Narrabri Hospital are frequently referred to Tamworth Hospital.

As with many rural areas, attracting and retaining appropriate medical staff has been an issue for a number of areas across the regional study area. This was confirmed during Social Assessment consultation where it was noted that, although there are general practitioners available, there can be long wait times. Specialists are often only available in the major hospitals, and sometimes may conduct consultations via Skype. Social Assessment consultation also indicated that some stakeholders felt some healthcare and emergency services in the region are under resourced.

## **6.6 Housing and accommodation**

### **6.6.1 Rental affordability and availability**

Rental affordability is understood to be vital for the economic vitality of communities and the wellbeing of individuals, and is the most likely portion of the housing market to respond to changes in population instigated by large projects (Lawrie et al., 2011).

It is generally accepted that if housing costs exceed 30 per cent of a low-income household's gross income, the household is experiencing housing stress (30/40 rule). SGS Planning, National Shelter, Community Sector Banking, and Brotherhood of St Laurence (2019) released a Rental Affordability Index that calculates rental affordability for groups identified as 'low income households'. The results of the 2018 index for the study area are shown in Table B3 in Appendix B. The findings show that housing in the study area is generally affordable and in some cases very affordable for most cohorts. However, all areas are unaffordable for pensioner couples and single part time worker parents on benefits. Housing affordability is a particular issue for low income cohorts in Narrabri, Narromine and Dubbo, where housing is unaffordable for more cohorts than other areas (SGS Economics and Planning et al., 2019).

Overall, recent housing vacancy data from June 2019 to May 2020 shows lower housing vacancy in the Orana and Far West Region (between 0.7 per cent and 2.7 per cent) compared to New England and North West Region (between 2.4 per cent and 3.9 per cent) (REINSW, 2020). A review of housing vacancy data (SQM Research, 2020) shows that housing vacancy rates have increased in the last decade in Narromine, Gilgandra and Narrabri, however in May 2020 they have remained low at 3.4 per cent, 1.1 per cent and 2.7 per cent respectively. However Baradine has had a housing vacancy rate of zero per cent since 2013. Additionally, rental availability at 25 June 2020 (with a search on realestate.com) was higher in Narrabri with 29 available properties compared to other towns such as Narromine (three), Gilgandra (one), and Baradine (none).

### **6.6.2 Accommodation**

Short-term tourist accommodation such as hotels/motels/cabins and caravan parks are important in regional areas to provide accommodation for visitors and to support regional tourism and economic activity.

Table 6.17 shows available tourist accommodation data for Statistical Area Level 2s (SA2s) relevant to the regional study area. The table shows that Dubbo has the highest number of accommodation facilities and beds (noting it is a larger catchment area), with smaller numbers available in other SA2s in the study area. It should be noted that data is only available for establishments with 15 or more rooms; therefore, the data in Table 6.17 is likely to be an underestimate. For example, Social Assessment consultation indicated that Coonamble has several accommodation facilities, whereas Table 6.17 shows there are only two facilities with more than 15 rooms available.

**Table 6.17 Tourism establishments, June Quarter 2016**

SA2	Number of establishments	Number of rooms	Number of beds
Narromine	3	63	196
Dubbo	33	1,007	3,086
Gilgandra	5	113	319
Coonamble	2	N/A	N/A
Narrabri	7	200	595
<b>Total</b>	<b>50</b>	<b>1,383</b>	<b>4,196</b>

Note: Data for Dubbo regional city is a total of the Dubbo – East, South and West SA2s.

Source: ABS (2016) = 8635.0 – Tourist Accommodation, Australia, 2015-16

Tourism Research Australia publishes occupancy rates based on tourism regions. The Central NSW region includes Coonamble, Warrumbungle, Gilgandra, Narromine and Dubbo, alongside a number of other LGAs which are outside the study area. The occupancy rate in Central NSW in 2018/19 was 63 per cent (Tourism Research Australia, 2019). Narrabri LGA is included in the New England North West tourism region which had an occupancy rate of 55.1 per cent in 2018/19.

Social Assessment consultations indicate that occupancy rates for tourist accommodation are generally low for LGAs in the study area except for Dubbo LGA during peak periods (around Easter and October). Consultation also indicates that the prolonged drought conditions has contributed to low accommodation occupancy rates throughout the region due to a decline in seasonal workers required for the agricultural industry.

Stakeholders consulted for the Social Assessment provided the following information about the availability of accommodation in the study area:

- There is an international gliding event being held in Narromine in January 2023 (section 6.2.1), which will likely require local accommodation for around six to eight weeks.
- October and November are the harvest period which would may bring seasonal workers to the region requiring temporary accommodation particularly in Coonamble and Gilgandra.
- Motel facilities in Narrabri are often at capacity during the week due to several construction projects happening in the area.
- Camp Cypress, located in Baradine Showgrounds, is an accommodation facility which has four cabins, two bunkhouses (including 20 bunks), and 20 powered caravan sites (Camp Cypress, 2011).

In addition to tourism facilities, there is an existing accommodation facility located on the edge of Narrabri town on Old Gunnedah Road (Narrabri Village). Managed by Civeo, Narrabri Village includes around 500 standard rooms along with a catered dining room, convenience shop, gymnasium, laundry facilities and outdoor recreation areas (Civeo, 2020). It is understood the facility is currently being used to accommodate Santos workers associated with the Narrabri Gas Project.

## 6.7 Access and connectivity

### 6.7.1 Travel behaviour

Journey to work data is captured in the 2016 Census and provides an indication of travel behaviour for residents in the study area. According to the journey to work data in Appendix B, travel to work by car as either a driver or passenger was the dominant mode for most residents across the regional study area ranging from 59.4 per cent in Warrumbungle LGA to 78.2 per cent Dubbo LGA.

Residents would have a high reliance on the regional road network to access employment across the region. Table 6.18 shows the proportion of workers that both reside and work in each LGA. The data shows that the majority of workers reside and work in the same LGA, and some travel to the neighbouring LGAs to access work, particularly in Narromine with many residents travelling to Dubbo for work. Social Assessment consultation confirmed these findings with stakeholders reporting that a significant proportion of the workforce often travel outside of their LGAs for work.

**Table 6.18 Resident workers, 2019**

	Narromine LGA	Dubbo Regional LGA	Gilgandra LGA	Coonamble LGA	Warrumbungle LGA
Resident workers	71.54%	87.11%	82.52%	77.17%	86.36%
Main origin of non-resident workers	Dubbo Regional (20.37%)	Narromine (6.60%)	Dubbo Regional (5.60%)	Gilgandra (8.31%)	Mid-Western Regional (6.59%)

Note: Data was only available for the LGAs within the Orana Region. LGA data was not available for the Northern Inland Region which comprises Narrabri LGA. Although, Narrabri LGA is expected to have similar trends as seen in the Orana Region.

Source: REMPLAN, 2019

For most of the LGAs except Dubbo, higher proportions of residents worked at home ranging from 11.6 per cent in Narromine LGA to 14.8 per cent in Coonamble and Warrumbungle LGAs, compared to the regional study area at 8.3 per cent and NSW at 4.8 per cent. This likely reflects the high incidence of self-employed farmers in the region (section 6.3).

### 6.7.2 Roads

Given the rural nature of the study area, residents in the region are highly reliant on the road network for connectivity and access. Four highways are located in the regional study area and are crossed by the proposal site:

- The Mitchell Highway to the east of Narromine. The highway links Narromine and Dubbo.
- The Oxley Highway to the west of Gilgandra. The highway provides east–west connectivity for Gilgandra residents.
- The Castlereagh Highway at Curban (to the north of Gilgandra). The highway provides north–south connectivity between Walgett and Gilgandra.
- The Kamilaroi Highway to the north of Narrabri. The highway provides east–west connectivity between Walgett and Narrabri.

The Newell Highway also runs parallel to the northern section of the proposal site, to the south of Narrabri. This provides north–south connectivity between Dubbo and Moree. The Newell Highway is currently being upgraded. In the regional study area, this includes upgrading the intersection of the highway with the Mitchell Highway in Dubbo, which is currently being constructed. Other projects which are being investigated include a new bridge over the Macquarie River in Dubbo, a bypass at Coonabarabran, and new overtaking lanes at various locations along the highway (TfNSW, 2019).

Two other main roads in the study area are crossed by the proposal site:

- Tomingley Road to the south of Narromine, which provides north–south connectivity between Narromine and Tomingley.
- Eumungerie Road to the north of Narromine, which provides north–south connectivity between Narromine and the Newell Highway.

Tomingley Road, Newell Highway, Castlereagh Highway and Kamilaroi Highway form part of a tourist route advertised by VisitNSW. The itinerary takes tourists from Parkes, through Dubbo, Coonabarabran, Lightning Ridge and finishing in Bourke.

The Mitchell Highway is also used as a tourist route to connect motorists from Dubbo to Broken Hill.

Further information about the road network in the study area is provided in the *ARTC Inland Rail Narromine to Narrabri Traffic and Transport Assessment* (JacobsGHD, 2020b).

### **6.7.3 Public transport**

NSW TrainsLink (XPT) runs passenger services between Dubbo and Sydney, and Moree and Sydney via Narrabri. CountryLink Coaches provide links from Dubbo to several towns close to the proposal site, including Narromine and Gilgandra.

School buses operate in towns near the proposal site, including Dubbo, Gilgandra, Gulargambone, Narromine, Coonabarabran, Coonamble and Narrabri. School routes that would be crossed by the proposal site are:

- Dubbo to Curban via Castlereagh Highway
- Gulargambone to Curban via Castlereagh Highway
- Narromine to Brady's Cowal via Tomingley Road.

In 2016, very small proportions of residents travelled to work by public transport (mainly bus) across the regional study area, ranging from 0.2 per cent in Gilgandra LGA to 1.3 per cent in Narrabri LGA, compared to the regional study area at 0.6 per cent and NSW at 16.1 per cent.

### **6.7.4 Air transport**

There are two airports in the regional study area. Dubbo City Regional Airport and Narrabri Airport have regular flights from Sydney and Brisbane, with Dubbo City Regional Airport also providing services from Melbourne, Newcastle and Canberra.



## 6.8 Summary of key findings

Overall, the regional study area faces challenges such as ageing of the population, population decline, outmigration of young people, and skill and labour shortages which present a barrier to diversifying local economies. The regional study area also has high numbers of Indigenous residents. Overall there are high rates of social capital and cohesion amongst communities. Communities across the region share values associated with:

- strong sense of community
- rural lifestyle, natural environment and peaceful amenity
- Indigenous and European heritage and farming history.

Top industries in the region in terms of economic output and employment include agriculture, construction, mining, manufacturing, and real estate. Tourism is also an important and growing industry for Dubbo, Narrabri and Warrumbungle. Unemployment levels vary across the region and experience high rates of fluctuation throughout the year due to several factors such as the seasonal nature of the agricultural industry, which combined with the prolonged drought conditions has affected many local businesses and economies. Some sectors of the community also experience underemployment such as Indigenous people and young people.

In recognition of some of the challenges in the region and the potential opportunities offered by the proposal, there are a range of local initiatives and programs which focus on upskilling the existing and future local workforce, attracting skilled migrants, supporting underemployed populations, and supporting and building the capacity of local businesses.

Although housing is generally affordable for most sectors of the community, it is unaffordable for some vulnerable groups. Tourist accommodation generally has low occupancy throughout the year, except for Dubbo and Narrabri.

Residents have a high reliance on cars and the road network to access services and facilities in towns throughout the region, and particularly the larger centres of Dubbo and Narrabri.

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## 7 Social impact assessment – construction

This section provides a detailed description and assessment of potential social impacts that may result from construction of the proposal. Impact identification and description has been informed by various sources of information and have been assessed in accordance with the impact assessment methodology (see section 3.2).

Overall, the key drivers of social change that may affect communities in the study area resulting from construction relate to:

- procurement opportunities for regional businesses and employment opportunities for local workforce
- presence of the proposed temporary workforce accommodation facilities located near Narromine, Gilgandra, Baradine and Narrabri
- land requirements for the proposal which would affect property owners along the proposal site
- construction activities leading to changes to local amenity and access.

The sections below describe the potential social impacts resulting from these drivers of social change.

### 7.1 Industry and business

Economic impacts resulting from construction of the proposal at the regional, state and national levels have been assessed in the *ARTC Inland Rail Narromine to Narrabri Economic Assessment* (KPMG, 2020). This section discusses the potential impacts for industry and businesses in the regional study area during construction from a social perspective.

#### 7.1.1 Industry

The *ARTC Inland Rail Narromine to Narrabri Economic Assessment* (KPMG, 2020) study reports that construction of the proposal has the potential to impact several industries in the regional study area. These include:

- The Construction sector, Professional, Scientific and Technical Services sector, and Wholesale Trade sector would expand during construction due to direct and indirect employment opportunities of employment (discussed further in section 7.2).
- The Agriculture, Forestry and Fishing, Mining, Manufacturing, Accommodation and Food Services, and Education and Training sectors would likely contract, with the potential for some workers in these industries to be attracted to opportunities on the construction program, depending on the labour market conditions.

The annual economic impact during the construction phase is estimated at \$4.25 million based on the area of agricultural land impacted. This includes the direct impact of removal of agricultural land, as well as indirect impacts such as impeded access (severance), interrupted management and labour and other costs. The impact is calculated as 0.43 per cent of the annual value of agricultural production across the regional study area. This is discussed and assessed in the *ARTC Inland Rail Narromine to Narrabri Agriculture and Land Use Assessment* (JacobsGHD, 2020a).

Construction of the proposal has the potential for relatively localised effects on the tourism industry as a consequence of amenity changes such as increased noise and views of construction activities at local recreational sites. These include at recreational areas within the Pilliga forests and near the Macquarie River, which are discussed further in section 7.7. There is potential that some visitors could be deterred from visiting these recreational areas when construction activities occur nearby. However these impacts would be short term and localised at these recreational sites. There is also potential for some visitors staying at Camp Cypress in Baradine to experience increased noise and visual changes due to the proposed temporary workforce accommodation facility, which would be located close to Camp Cypress at Baradine Showground. As discussed in section 6.2.4, while Social Assessment consultation indicates that visitors are likely to value the tranquil setting offered by Camp Cypress, potential amenity impacts are expected to be managed through visual screening and noise mitigation measures. It is therefore expected that most tourists would not be deterred from staying at Camp Cypress (section 7.7.2).

At the regional level, tourism is unlikely to be measurably affected by construction of the proposal. There are multiple tourist attractors and destinations throughout the regional study area (discussed in section 6) which would provide alternatives for visitors should a selected area be affected. Key tourist destinations across the regional study area, such as Dubbo and Warrumbungle National Park, would not be affected. As discussed in section 7.4, while there may be some demand on tourist accommodation facilities during construction, it is unlikely to restrict usual demand in the region.

The majority of the proposal would be constructed through agricultural and forested areas. Tourists moving through the region would be unlikely to face any impediments to their journeys beyond potential short traffic control delays on roads where works would be required.

The proposal is therefore not expected to affect the tourism industry at a regional level during construction.

### **7.1.2 Local and Indigenous businesses**

ARTC, through its contractor's terms and conditions, would require the primary contractor to maximise social performance outcomes in accordance with the *Australian Jobs Act 2013* and the *Australian Industry Participation National Framework* (Australian Government, 2001), and the *Inland Rail Sustainable Procurement Policy* (ARTC, 2018a). This would include strategies such as negotiating targets for local business participation, and prioritising local procurement through the supplier registration portal.

The contractor would be required to prepare a proposal-specific industry participation plan (see section 10). The plan would be developed and implemented to manage the potential employment and regional economic benefits of the proposal. It would identify an achievable list of goods and services that would likely be subcontracted, which includes details about how opportunities would be communicated to local and Indigenous businesses. ARTC would require the contractor to propose a target for local and Indigenous business participation.

ARTC would also require the contractors to comply with the *Inland Rail Indigenous Participation Plan* (ARTC, 2019) which refers to the *Australian Government Indigenous Procurement Policy* (Australian Government, 2015). As highlighted in section 2.2.1, this policy states that a minimum three per cent of contracts must be awarded to Indigenous businesses.

As discussed in section 5.2, Social Assessment consultation indicates there are a range of local businesses in the local and regional study areas that are willing to participate in procurement opportunities associated with construction. This includes opportunities to supply the temporary workforce accommodation facilities (eg catering, laundry, cleaning). However there are barriers for participation of local businesses as discussed with stakeholders (see section 5.2.5). These include lack of administration resources, inability to meet procurement requirements, costs associated with upskilling to meet procurement requirements, and insufficient notice or information regarding procurement requirements.

Social Assessment consultation found there are few Indigenous businesses in the regional study area with the capacity to participate in construction procurement (discussed in section 5.2). There are barriers for Indigenous people establishing businesses, such as fees and administration requirements for registration. However some LALCs indicated they or other organisations could assist individuals who wish to establish a business, as well as provide other support to increase their readiness and capacity for the procurement requirements. Given the low number of existing local Indigenous businesses in the region, it is expected there would be Indigenous businesses located outside of the regional study area that would also benefit from procurement opportunities on construction of the proposal.

The non-resident construction workforce may also bring indirect economic benefits for the region due to spending of wages. Due to the close proximity of the temporary accommodation facilities to towns in the local study area (located either on the edge of towns or within a 15 minute drive), it is also likely that some local businesses in the host towns of Narromine, Gilgandra, Baradine and Narrabri might benefit from ad-hoc purchases made by the temporary workforce living at the facilities. The businesses likely to benefit would include food and beverage, hospitality, and retail businesses. However there is potential for workers to travel to larger centres which offer increased choice of services and businesses. This may be more likely for workers housed in Narromine which is about 40 kilometres or a 30 to 40 minute drive from Dubbo.

## **7.2 Employment, workforce and training**

As described in chapter A8 of the EIS, the overall construction program would be about 48 months. During this time, the construction workforce is expected to be up to 2,000 workers at peak during the time of main construction works (which would be undertaken over 36 months). During the main construction works there may also be some additional short-term workers required at times for specialist work. During site establishment and preliminary activities, testing and commissioning, and finishing and rehabilitation the workforce numbers would vary, but would typically be up to 1,200 people across the four construction areas.

In addition to the direct jobs, the findings of the *ARTC Inland Rail Narromine to Narrabri Economic Assessment* (KPMG, 2020) projects that, on average, 1,535 indirect jobs would be generated in the Far West and Orana Region and New England and North West Region each year during construction in a 'slack' labour market, or 261 indirect jobs in a 'tight' labour market. The study explains that in a slack labour market scenario, there would sufficient unemployed and under-employed workers in the region to accommodate the increase in demand for labour without increasing real wages. While in a tight labour market, wages would be bid up to attract currently employed workers to the construction businesses contracted to construct the proposal.



The KPMG study predicts that the labour market conditions most likely to prevail during the construction phase of the proposal would be most consistent with a slack labour market scenario. The report discusses that labour market conditions may have deteriorated further since December 2019 which was the most recent regional labour market data available for the study. This is likely compounded by the economic shock of the COVID-19 pandemic, with the study reporting that this would increase the likelihood that the national and regional labour markets will be consistent with the slack labour market scenario during the construction phase.

The KPMG study further predicts that, given the availability of unemployed persons in the region with relevant skills to the construction industry, it is reasonable to assume the regional labour market has capacity to supply a significant portion of the workforce requirements of the proposal without major disruption. This also assumes that workers with specialist skills would be sourced from outside the region.

A variety of skills would be required during construction including labourers, tradespeople, machinery operators, engineers, surveyors and site supervisors. ARTC is committed to creating opportunities for the development of skilled local workers through Inland Rail, by using local workers wherever possible (ARTC, 2018a).

ARTC would require its contractors to have regard to the NSW Government *Infrastructure Skills Legacy Program* (Department of Industry, 2017) (see section 2.3.2) and negotiate suitable targets for employment and workforce development. The agreed targets for local, Indigenous, young, and female workers would be based on proposal requirements and socio-economic profiles of the local area.

However, to fulfil the commitments, there are a number of challenges that would need to be considered which are outlined below:

- As identified in section 6.4.3, there is a current and projected skills shortage in the regional study area which could limit the ability of the proposal to deliver local employment opportunities, particularly given the proposal is a greenfield project and may require specialised skills to build the new rail line and complex structures (eg bridges). Social Assessment consultation (section 4) found that, due to the prolonged drought conditions, many local farmers are seeking alternate income and would have relevant skills for some construction activities. Stakeholders indicated that some farmers may require support to gain required certification to be employed as construction workers. However stakeholders also noted that the availability of agricultural workers is seasonal, and dependent on the drought.
- As discussed in section 6.4.2, retaining young people is a key challenge in the regional study area due to a range of factors which are common for regional areas (eg fewer education and employment opportunities). The youth labour force is also volatile and fluctuates on a monthly basis which is likely due to young people gaining employment during school and university holidays and not being available for work at other times. The 2016 data shows that youth unemployment was higher in Coonamble, Warrumbungle and Narramine LGAs. However the above mentioned challenges limit the scope to employ young people on a full-time basis due to their limited availability and preference to live in other urban centres outside of the region.
- Section 6.4.2 shows there are high levels of unemployment for Indigenous people in the regional study area, particularly in Coonamble, Warrumbungle and Gilgandra, as well as intergenerational unemployment. The barriers to Indigenous employment in the study area identified through Social Assessment consultation include limited access to the internet, lack of transport and resources, literacy, and drug and alcohol use.

- Section 6.4.2 shows that unemployment for both males and females in the regional study area is seasonal, with female unemployment dropping to zero between December and April. In general, the rates of unemployment in the study area is higher for males than for females, and these rates are higher than the State average for both males and females in Coonamble and Warrumbungle. The target for female employment on the proposal would need to consider the low overall unemployment rates for females in the study area, along with the seasonal fluctuations.

Section 6.4 highlights several initiatives by various agencies and councils in the regional study area which focus on addressing some of these challenges and supporting and upskilling the local workforce. While employment opportunities would be relatively short term during construction, training opportunities have the potential to lead to longer term benefits for workers who gain employment on the proposal.

## **7.3 Property and landholder impacts**

### **7.3.1 Directly affected properties**

The proposal would involve both permanent and temporary land requirements. From a social perspective, social impacts due to property impacts would start to occur before construction, therefore this section discusses both permanent and temporary land requirements.

#### *Permanent land requirements*

Land requirements for the proposal are expected to directly affect about 274 properties in the local study area, including about:

- 141 privately-owned properties
- 133 publicly-owned properties.

As discussed in section 6.1.1, land required for the proposal mainly comprises rural uses, including land used for grazing and cropping, as well as land used for forestry.

Concerns about potential impact on farm infrastructure, such as stock dams, water infrastructure, silos and machinery storage, were raised during consultation with property owners undertaken for the proposal. Where appropriate, property adjustment works would be undertaken in consultation with the affected property owner.

Concerns were raised by property owners during EIS consultation undertaken by ARTC about potential impacts associated with the severance or fragmentation of rural properties due to partial land requirements. In particular, issues raised by property owners related to:

- potential impact on the viability of farming operations due to the loss of areas of severed land
- changes to the shape and alignment of paddocks affecting the movement of machinery and efficiency of farming operations
- increase in operating costs due to changed farm access.

Where practicable, the proposal has been located along property boundaries to avoid fragmentation of properties. Despite this, partial land requirements would have the potential to result in the severance or fragmentation of rural properties in the local study area along the proposal site, including some larger land holdings. While access to residual property parcels would be maintained via existing local roads where practicable, disruption to internal property access may in some cases have potential to reduce efficiency of farming operations, increase operating costs associated with the movement of livestock and/or farm machinery within the property, and require changes to current farming practices. ARTC would undertake further consultation with affected landowners in the detailed design phase to identify residual parcels of land. Further discussion about potential impacts of the proposal on farming operations is provided in the *ARTC Inland Rail Narromine to Narrabri Agriculture and Land Use Assessment* (JacobsGHD, 2020a). Further detail about property impacts, and proposed mitigation measures, is provided in chapter B12 of the EIS.

The permanent land requirements for road infrastructure would mainly be associated with localised road realignments to maintain safe vehicle access across the new railway corridor. This would generally affect land adjoining existing road corridors or the proposed rail line. The requirement for this land is not expected to impact on the overall use or functioning of affected rural properties, beyond those described for the rail corridor.

Concerns about potential impacts on property values were identified during EIS consultation. Property values are driven by a range of factors, with agricultural land values being generally influenced by their productive value. However it is extremely difficult to anticipate market perceptions, particularly as these in turn are influenced by broader macroeconomic considerations (eg strength of the economy, outlook for economic growth, interest rate levels). As such, a reliable assessment of the interaction between the proposal and the property market cannot be made with any certainty.

ARTC is responsible for undertaking land acquisition negotiations for Inland Rail on behalf of Transport for NSW. All property acquisitions would be managed by ARTC in accordance with the *Land Acquisition (Just Terms Compensation) Act 1991*. It is Transport for NSW's preference to acquire land by negotiated agreement. However, a compulsory acquisition process may be required if agreement cannot be reached or is otherwise necessary.

Detailed design and construction planning would continue to be refined to minimise potential impacts on existing land uses and properties, as far as reasonably practicable.

Consultation with landholders would be ongoing to identify opportunities to minimise impacts on operations where practicable.

### **Temporary land requirements**

During construction, temporary leases of land would also be required to accommodate construction infrastructure such as temporary workforce accommodation, construction compounds, and borrow pits, as well as construction access tracks. About 413 properties in the local study area would be subject to temporary lease requirements, including about:

- 180 properties that are privately owned
- 233 publicly-owned properties.

Many properties affected by temporary leasing include those also subject to permanent land requirements for the proposal's operational infrastructure. Properties identified for temporary lease mainly comprise rural uses. Those areas affected by temporary lease would be temporarily disrupted during the construction phase and would typically not be available for use or access by the property owner.

Land required during construction only would be via a lease or memorandum of understanding with the relevant government agency or private landholder. Following the construction phase, this land would be rehabilitated and returned as close as possible to pre-construction condition, or as agreed with landowners.

### **7.3.2 Social effects due to property impacts**

The proposal would require removal of two houses located on rural properties. Residents of these properties would be required to relocate prior to construction. Residents of these properties may relocate elsewhere within the property if it is appropriate. This would be determined between ARTC and landowners during consultations in the detailed design phase. Given the relatively small number of houses directly impacted by the proposal, effects on community relationships and social networks due to property impacts are expected to be minor.

Some property owners facing changes due to property impacts may experience frustration, stress and anxiety about these changes, potentially impacting on individuals' health, wellbeing and quality of life. Social Assessment consultation and ARTC EIS consultation (see section 5.2) indicates that uncertainty around the proposal over recent years, particularly in relation to potential impacts on property, family lifestyle and farming operations, has caused a level of frustration and stress for some property owners. Many affected properties have been owned and farmed by the same family over many generations, with families of these properties having strong emotional attachment and family connections to their land. The potential loss of this family history and changes to rural lifestyles is likely to contribute to the level of stress and uncertainty about the proposal felt by these property owners and their families.

As discussed in section 5.2, communities across the regional study area have been affected by drought, which has placed increased pressure on landholders and those dependent on their properties for household income. The economic shock brought by the COVID-19 pandemic also has the potential to affect communities in the regional study area. These factors may compound the uncertainty and stress experienced by property owners affected by the proposal's land requirements.

Concerns were identified by property owners, during EIS consultation undertaken by ARTC, about potential implications of the proposal on 'day-to-day family operations' for occupants of properties near construction activities. These include potential impacts on school bus services and mail deliveries due to local access changes, disruptions to internet access due to utility changes, and disruptions to student learning due to amenity and utility disruptions. Access to individual properties in the local study area near the proposal site would be maintained during construction, although some temporary changes may be required. Further discussion about potential impacts on local access and connectivity during construction is provided in section 7.6. Potential impacts for properties in the local study area near the proposal site associated with changes to local amenity during the construction phase are discussed in section 7.5.

Social Assessment consultation and ARTC EIS consultation found there are concerns about water use during construction and the potential for flooding impacts which could affect landholders and agricultural activities. Concerns about water use for construction may be particularly exacerbated by the prolonged drought conditions. The proposal would construct and utilise deep aquifer bores to minimise surface water use and impacts to landowners and agricultural activities. The strategy for water use is discussed further in the *ARTC Inland Rail Narromine to Narrabri Groundwater Assessment* (JacobsGHD, 2020e) and *ARTC Inland Rail Narromine to Narrabri Agriculture and Land Use Assessment* (JacobsGHD, 2020a).

## 7.4 Housing and accommodation

As discussed in chapter A8 of the EIS and section 4.3.1, the non-resident construction workforce would be accommodated in temporary workforce accommodation located at Narromine, Gilgandra, Baradine and Narrabri (refer to Figure 1.3). The sites have been selected based on preliminary consultation with councils and the design of the proposed facilities would be finalised during detailed design in accordance with ARTC's *Inland Rail Programme Accommodation Principles* (ARTC, 2018b) and in consultation with councils, nearby landholders and other key stakeholders.

The temporary workforce accommodation facilities would operate concurrently for the duration of the construction program (ie around four years) and would have a combined capacity of up to 2,000 workers. The location and capacity of each of the facility are as follows:

- Narromine South – located in a multi-function compound about eight kilometres south of Narromine with capacity for up to 250 workers.
- Narromine North – located on Euromedah Road about ten kilometres north-east of Narromine with capacity for up to 250 workers.
- Gilgandra – located on the north-western edge of Gilgandra on Federation Street with capacity for up to 500 workers.
- Baradine – located on the western edge of Baradine on Lachlan Street at Baradine Showground with capacity for up to 500 workers.
- Narrabri West – located in a multi-function compound situated where the proposal connects with the Narrabri to Walgett Line, about four kilometres south west of the Narrabri central business district. It would have capacity for up to up to 500 workers.

Further information is provided in chapter C2 of the EIS.

The temporary workforce accommodation would be sufficient for the peak workforce if required; however, as mentioned in section 7.2, ARTC is committed to maximising employment opportunities for the local workforce, therefore it is expected there would be local workers who continue living in their usual place of residence, and/or stay in the temporary workforce accommodation facilities if they live further than one hour's drive from the construction site. As predicted in the *ARTC Inland Rail Narromine to Narrabri Economic Assessment* (KPMG, 2020) it is reasonable to assume the regional labour market has capacity to supply a significant portion of the workforce requirements of the proposal. However, it is not possible at this stage to estimate the proportion of local and non-resident workforce. ARTC and the primary contractor would undertake an analysis of the likely availability of construction workforce from the region prior to construction.

Given that the temporary workforce accommodation would be sufficient for the peak workforce, it is expected the majority of non-resident workforce would stay in the temporary workforce accommodation facilities. However the proposal may increase some demand for local tourist accommodation facilities during the design and construction phase as ARTC and specialist workers access the proposal site for short periods of time.



As discussed in section 6.6.1, there are at least 50 temporary accommodation facilities in towns close to the proposal with a total of 1,383 rooms, which is also noted to be an underestimate due to the limitations of the data. It should also be noted that the majority of facilities and rooms are located in the southern part of the regional study area and particularly Dubbo LGA, with less facilities available in the northern part of the regional study area. While the average occupancy rates are between 55.1 per cent and 63 per cent across the region, Social Assessment consultation confirmed that occupancy rates are generally low except for Dubbo during peak periods, and have been particularly low due to the prolonged drought conditions. Social Assessment consultation also indicated the availability of tourist accommodation fluctuates depending on factors such as harvest season, events and other construction projects occurring in the regional study area.

Given the overall low occupancy rates, and as the demand for accommodation facilities would be small and likely to be spread across the local study area at different times during the construction period, it is expected there would generally be capacity in the local and regional study areas to accommodate the small numbers of temporary non-resident workers that may stay in towns. As discussed in section 6, tourism is particularly important to the Narrabri, Warrumbungle and Dubbo LGAs. The potential small increase in demand for tourist accommodation would generate a positive impact for local accommodation service providers, and is unlikely to restrict the usual demand for accommodation in the region.

Although the temporary workforce accommodation would be sufficient for the full construction workforce if required, it is likely some non-resident workers may prefer to rent a property close to the proposal site. It is assumed this would most likely occur in the towns that host temporary workforce accommodation facilities or other towns nearby, as workers would be bussed from these facilities to the work sites each day. This demand is likely to be small and subject to availability of rental accommodation at a reasonable price. As discussed in section 6.6.1, there are varying levels of availability of rental properties and varying housing vacancy rates across the local study area. As discussed in section 6.6.1, while the regional study area is generally affordable, housing is unaffordable for more cohorts in Narrabri, Narromine and Dubbo. It is unlikely that such minor demand for rental accommodation would increase the price of rental properties in these locations. Cumulative impacts on accommodation are discussed in section 9.1.

## **7.5 Local amenity, community values and wellbeing**

This section describes the potential social impacts that may occur due to changes to amenity in the local study area during construction which may affect the quality of life and values of community members. Changes to amenity related to changes in noise levels, visual amenity and air quality. During construction, impacts on local amenity would mainly be associated with:

- site establishment, vegetation clearing, earthworks, bridge works and track work within the rail corridor
- works for road infrastructure, including temporary construction access roads
- transport of materials, plant and equipment, including on unsealed roads
- establishment and operation of construction infrastructure, including construction compounds (eg due to stock piling of materials and the operation of concrete batching facilities) and borrow pits (eg due to excavation, blasting and material handling)
- presence of temporary workforce accommodation facilities, resulting in noise, traffic and potential lighting impacts for occupants of nearby properties.

Amenity changes which affect the users and function of social infrastructure are discussed in section 7.7

### 7.5.1 Noise and vibration

In general, construction works would be undertaken between 6am and 6pm seven days a week. Where construction activities are undertaken near to sensitive receivers such as residential properties, periods of respite would be implemented on alternate weekends (between 1pm on Saturday to 7am on Monday), which would help to minimise potential impacts. Further information on the proposal working hours is provided in chapter A8 of the EIS.

Construction activities for the rail corridor and road infrastructure are generally removed from residential areas, although there are a number of residences and rural and community uses located near construction activities in the local study area that may experience reduced amenity. It is expected that for many properties, potential amenity impacts from construction activities would generally be relatively short-term with construction works moving along the proposal site. Construction works for larger and more complex structures, such as the Macquarie River, Castlereagh River and the Narrabri Creek / Namoi River crossings, are expected to take up to 36 months, which could contribute to the potential for longer-term amenity impacts on properties near these works. Other construction infrastructure, such as borrow pits and compounds, would be required for the duration of construction (ie 48 months).

Reduced amenity from construction activities may cause annoyance at times for residents, occupants and users of properties close to construction works in the local study area, potentially impacting on people's daily routines and behaviours and their enjoyment of usual outdoor activities. This may result in some people spending increased leisure time indoors or needing to close windows to reduce disruptions for activities such as reading, listening to the radio and watching television. The *ARTC Inland Rail Narromine to Narrabri Agriculture and Land Use Assessment* (JacobsGHD, 2020a) reports that while livestock grazing patterns may be altered by noise, livestock generally become habituated to noise therefore productivity is not affected.

Some construction activities would be undertaken outside of the proposed construction hours, including but not limited to works at:

- either end of the alignment where the new line is connected to existing tracks, with these activities mainly occurring during rail corridor possessions, which would typically occur over a 72-hour period, four times a year
- bridge sites over the Macquarie River, Castlereagh River and Narrabri Creek/Namoi River to allow for large concrete pours
- bridges constructed over public roads (Webbs Siding Road, Mitchell Highway, Old Mill Road, Kickabil Road, Cairns Crossing Road, Yarrie Lake Road, The Island Road, and Kamilaroi Highway), which are estimated to be about two nights at each location.

The findings of the *ARTC Inland Rail Narromine to Narrabri Noise and Vibration Assessment – Construction and Other Operations* (JacobsGHD, 2020f) indicate night-time works would occur intermittently. However, there is potential for some residents in close proximity to be disturbed by increased noise which could include sleep disturbance. Sleep disturbance has the potential to lead to tiredness for some people, potentially affecting people's moods and personal relationships, ability to concentrate on work and other activities, and health and wellbeing. These impacts can be greater on vulnerable groups who may be more sensitive and have less capacity to adapt to potential noise impacts and impacts relating to sleep disturbance.

The potential for noise impacts during construction would be managed by implementing the Inland Rail NSW Construction Noise and Vibration Management Framework and the mitigation measures provided in chapter B8 of the EIS. Measures include preparing location and activity-specific construction noise and vibration impact statements, which would confirm predicted impacts at relevant receivers to assist with the selection of feasible and reasonable management measures, and implementing a construction noise and vibration management plan as part of the construction environment management plan (CEMP), which would include appropriate mitigation for residents affected by night time noise impacts, which would be developed in consultation with affected residents.

There are a number of roads within the local study area which will have increased traffic as a result of heavy vehicle movements along construction access routes (discussed further in section 7.6). The findings of the *ARTC Inland Rail Narromine to Narrabri Noise and Vibration Assessment – Construction and Other Operations* (JacobsGHD, 2020f) indicate that noise impacts from the movement of construction vehicles are generally not anticipated or would not be noticeable. Therefore no social impact is anticipated as a result of increased noise from construction vehicles.

The construction and operation of temporary workforce accommodation may also lead to increased noise for nearby residents. Reduced amenity would generally affect adjacent neighbours, particularly for the facility in Gilgandra which is located in a residential area and Baradine with this facility being located within Baradine Showground (discussed further in section 7.7). The findings of the *ARTC Inland Rail Narromine to Narrabri Noise and Vibration Assessment – Construction and Other Operations* (JacobsGHD, 2020f) indicate the facilities in Narromine, Baradine and Narrabri are generally removed from residential areas therefore residents are not expected to be impacted by increased noise. However residential receivers located in close proximity to the Gilgandra facility could experience clearly audible to highly intrusive noise at times, particularly during establishment of the facility.

Potential noise impacts associated with temporary workforce accommodation would be managed by implementing the measures described above, and appropriate measures defined by the temporary workforce accommodation plan (see section 10).

### **7.5.2 Air quality**

Chapter B10 of the EIS provides the results of the assessment of potential air quality impacts during construction. The assessment identified 57 receivers within close proximity to construction activities that could be affected by reduced air quality (dust) during construction. This includes 25 receivers within 50 metres of rail and road infrastructure construction, one receiver within 550 metres of a borrow pit, 26 receivers within 140 metres of the temporary workforce accommodation facilities at Gilgandra and Baradine, and five receivers within 140 metres of multi-function compounds at Narromine South and Narromine West. However, it is worth noting those receivers located in close proximity to temporary workforce accommodation facilities are likely to only experience impacts to air quality during establishment of the facility.

Residents living in the local study area who are in close proximity to construction activities may notice dust which could increase the time spent by some people cleaning and washing surfaces. Some vulnerable groups including people with medical conditions (eg asthma or other respiratory conditions), and the elderly may be more sensitive to increased dust.

An air quality management plan would be prepared as part of the CEMP to define the detailed management measures that would be implemented to minimise the potential for air quality impacts on the local community.

The potential impacts on agricultural activities due to construction dust is considered in the *ARTC Inland Rail Narromine to Narrabri Agriculture and Land Use Assessment* (JacobsGHD, 2020a).

### **7.5.3 Visual amenity and loss of privacy**

During construction, the presence of construction infrastructure, such as construction compounds, temporary workforce accommodation, borrow pits and stockpiles, would have the potential to change the landscape and visual amenity of surrounding areas. Construction activities, such as vegetation clearing, earthworks, and track work, also have potential to effect visual amenity along the length of the proposal site.

The potential impacts on visual amenity of these changes would depend on the nature and intensity of the construction activity. The change in the visual environment would generally be experienced from a relatively short distance. Visual impacts would be more significant at locations where residential or other sensitive receivers have unscreened views towards the proposal site.

Potential impacts on visual amenity from these activities are likely to be localised and/or experienced in the short term. The greatest potential for visual impacts would be at sensitive receivers with views towards construction compounds and bridge structures under construction – particularly the Macquarie River bridge and Narrabri Creek / Namoi River bridge (JacobsGHD, 2020c). Potential impacts to users of Macquarie River are discussed in section 7.7.2.

Road realignments and new temporary access roads would also change the visual amenity for occupants of nearby properties, local communities and visitors travelling through the area. It is anticipated that these works would be minor and any impacts on visual amenity would generally be temporary and would reduce over time (JacobsGHD, 2020c).

Changes to visual amenity from construction activities and infrastructure may impact on community values relating to the rural landscape and reduce the enjoyment of private properties for residents in the local study area close to construction areas.

Temporary workforce accommodation facilities may be visible from some residential properties in Narromine, Gilgandra, Baradine and Narrabri, and some residents may be impacted by a loss of privacy due to the proximity of workers to their properties. This may be more likely in Gilgandra and Baradine as the facilities are located on the edge of residential areas. The temporary workforce accommodation facilities would be designed in accordance with the temporary workforce accommodation plan, which would define measures and design requirements to reduce potential impacts on surrounding receivers (see section 10). Such measures would include visual screening (as required) to minimise the potential for visual impacts, particularly where facilities are visible from residential properties.

Construction activities would be restricted to within fenced areas of the proposal site and construction traffic would be limited to designated routes and/or as agreed with landholders when working on or near private properties. Reduced visual amenity and privacy may be greater where there are residential properties in close proximity to key features of the proposal.

Mitigation measures to reduce the potential for visual impacts are provided in chapter B13 of the EIS.

### **7.5.4 Wellbeing and safety**

The proposal has the potential to impact community values associated with wellbeing and safety in a number of ways. This would be particularly related to the proposal's land requirements and varying community attitudes towards the proposal, and wellbeing and safety issues related to a non-resident workforce.

It is understood from ARTC and Social Assessment consultations there are varying community attitudes towards the proposal amongst communities in the regional study area. Strongly held unsupportive views about the proposal by affected landholders and the general community are likely to cause increased stress and anxiety in the community. Given the long planning, design and approval timeframes of the proposal, such impacts can be experienced by some community members over an extended period of time, affecting mental health and wellbeing for some. These potential impacts, when compounded with impacts of other factors affecting the regional community, such as the prolonged drought, recent bushfires and the COVID-19 pandemic, could exacerbate feelings of stress and anxiety related to the proposal. Some landholders who are affected by the proposal land requirements (see section 7.3.2) may be particularly affected by stress and wellbeing effects.

A non-resident construction workforce is typically dominated by male workers under 45 years (Western Research Institute, 2018). It is therefore expected that the majority of the temporary non-resident construction workers for the proposal would be males. This is likely to increase the temporary male population in the host towns of Narromine, Gilgandra, Baradine and Narrabri and increase the associated perception of anti-social behaviour and safety concerns for locals. In particular, the Gilgandra temporary workforce accommodation facility is located adjacent to Jack Towney Hostel, an aged care facility for Aboriginal and Torres Strait Islander people. Social Assessment consultation indicated that residents may be concerned about perceived safety and security concerns associated with nearby facilities.

A workforce management plan would be prepared to define the measures that would be implemented to manage the construction workforce, including a code of conduct (section 10). Social Assessment consultation confirmed that non-residential workforces represent a low source of call-outs for local police services (section 5.2.6). There is a growing body of literature that has found that non-residential workforces represent no higher risk for crime or disorder than the general population, but are often the source of 'blame' for existing issues (Ruddell and Ortiz 2015; Scott, Carrington, and McIntosh 2011; Campbell, Paterson de Heer, and Kinslow 2014).

In terms of the wellbeing of non-resident workers, a 2018 study by the Centre for Transformative Work Design undertook a literature review of 59 studies, a survey of more than 3,000 non-resident workers, in-depth interviews, and surveys of partners to understand the relationship between non-resident worker practices and mental ill health. The study found that non-resident workers had a greater risk of mental ill health than workers undertaking similar work under residential work arrangements, even when taking account of associated risk factors such as age, sex, and education. Isolation and loneliness was linked to the majority of poor mental health and wellbeing measures (Centre for Transformative Work Design, 2018). Some of the non-resident workforce engaged for the proposal for a prolonged period of time could experience these effects. The workforce management plan would also include strategies to promote the wellbeing of the workforce, such as participation in sporting and community groups and access to mental health services. The temporary workforce accommodation facilities would also include spaces for social activities.

#### **7.5.5 Heritage values**

As summarised in section 6.8, the communities in the local study area have a strong connection to the land and hold strong values in relation to the study area's natural environment and heritage. The local and regional study areas have a range of places and features that are important to communities, including places of cultural importance to local Aboriginal communities and historic heritage places related to the early non-Aboriginal settlement and current and former land use.



The *ARTC Inland Rail Narromine to Narrabri Aboriginal Cultural Heritage Assessment* (JacobsGHD, 2020g) found there are a variety of cultural heritage values within the study area, and the cultural landscape is understood to be an area traversed by an interconnecting network of physical, social and spiritual places. The assessment found a range of Aboriginal heritage sites with high social significance and cultural value may be likely or potentially impacted. The assessment recommends a range of management measures to avoid, minimise and mitigate impacts in consultation with Aboriginal stakeholders throughout the detailed design and construction phases.

The *ARTC Inland Rail Narromine to Narrabri Non-Aboriginal Heritage Assessment and Statement of Heritage Impact* (JacobsGHD, 2020h) found there are several historic sites that would, or would have the potential to be, impacted by construction activities and infrastructure. The assessment recommends a range of mitigation measures to minimise the potential significance of these impacts. These include a heritage interpretation plan to set out key themes and recommendations for how heritage values could be recognised, such as interpretive signage or displays of historical items at local museums.

It is expected that these measures would help to manage potential impacts on local community values associated with Aboriginal cultural heritage and non-Aboriginal heritage.

## **7.6 Access and connectivity**

During construction, potential impacts on local access and connectivity would mainly be associated with:

- increased construction traffic on roads within the study area, including heavy vehicles used to deliver plant, materials and equipment, and transport workers between accommodation camps and construction sites
- temporary changes to road conditions near construction works and within or near road corridors, including reduced speed limits and access changes.

Roads used for construction access include arterial roads, such as the Newell Highway, Oxley Highway, Mitchell Highway, Castlereagh Highway and Kamilaroi Highway, and local roads that provide access for communities to towns, local destinations and properties.

The *ARTC Inland Rail Narromine to Narrabri Traffic and Transport Assessment* (JacobsGHD, 2020b), found that increased construction traffic would be temporary and incremental, therefore a negligible impact is expected to occur on the local road network. However there may be some minor delays and disruptions for road users, including local communities, travellers and road freight operators, potentially increasing travel times for some motorists. While traffic impacts would be managed through implementation of a traffic, transport and access management plan, as discussed in section 6 it is likely that many residents across the regional study area currently travel considerable distances to major centres for work, school or leisure activities. Any additional delays and increased travel times may be a concern for local communities. Increased travel time from delays and disruptions to roads within the regional study area may also impact on transport costs for some freight and commercial road users.

Social Assessment consultation with councils in the regional study area identified some concerns about the potential impacts associated with the increased use of local roads by construction traffic. Specifically, concerns were raised about the potential for increased traffic volumes and heavy vehicles associated with construction to damage local road infrastructure resulting in increased maintenance costs for councils, and associated road safety issues for local communities and motorists. The potential for damage to local roads would mainly be a risk for construction access roads that currently service low levels of traffic or low weight vehicles, with these roads possibly requiring upgrade and/or more frequent repair to maintain road safety. This potential impact is considered in the *ARTC Inland Rail Narromine to Narrabri Traffic and Transport Assessment* (JacobsGHD, 2020b).

An increase in construction traffic on roads within the regional study area, and changes to road conditions due to works within or near to road corridors, may increase possible road safety risks and impact on perceptions of road safety for some motorists, cyclists and pedestrians. This is a particular risk for travellers who may not be familiar with existing road conditions or vulnerable groups such as children and the elderly. An increase in the number of vehicles on local roads associated with the movement of the construction workforce also has potential to impact on perceptions of road safety in some locations, for example on roads that provide access to residential and community uses in Baradine and Gilgandra. Shuttle buses would be used to transfer workers between the temporary workforce accommodation and construction areas on a daily basis, which would help to minimise potential traffic impacts on local roads.

Implementation of the traffic management measures recommended in the *ARTC Inland Rail Narromine to Narrabri Traffic and Transport Assessment* (JacobsGHD, 2020b), including communication about changes to local road conditions, would help to manage potential risks to road safety.

Some local and school bus routes serving schools in towns near the proposal site use roads that would be crossed by the site, including the Mitchell Highway and Tomingley Road near Narromine, and Castlereagh Highway near Curban. School bus routes also use roads that would be used to provide construction access for the proposal. These include roads within Narromine town centre, Warren Road north of Narromine, the Newell Highway, and roads within west of Narrabri and the Narrabri town centre. Concerns about potential impacts on school bus services were identified during EIS consultation undertaken by ARTC. During construction, potential impacts on local and school bus routes may include delays and disruptions due to changes in local roads and road conditions. Possible safety risks and perceived impacts to student safety may also be associated with increased construction traffic on roads used by school bus routes and with school bus stops. School bus stops are also located near to construction works at Narwonah Road and Mitchell Highway at Narromine, which may also present potential safety risks for school students. The *ARTC Inland Rail Narromine to Narrabri Traffic and Transport Assessment* (JacobsGHD, 2020b) recommends that a traffic, transport and access management plan be developed in consultation with bus operators and implemented during construction. It is expected this would help to minimise potential impacts for school students.

Access to private properties near the proposed works would be maintained during construction. Where temporary changes are required, suitable access arrangements would be implemented in consultation with affected property owners.

One passenger rail service operates on a daily basis in the study area between Werris Creek and Narrabri. This does not intersect with the proposal site and is not anticipated to be impacted by construction.

A detailed assessment of potential construction traffic and transport impacts is provided in *ARTC Inland Rail Narromine to Narrabri Traffic and Transport Assessment* (JacobsGHD, 2020b). Potential impacts of construction traffic on social infrastructure, including emergency services, are considered in section 7.7.2, while the potential impacts of construction traffic on local amenity are considered in section 7.5.

## **7.7 Impacts on social infrastructure**

This section describes the potential social impacts on community and recreation infrastructure and services during construction of the proposal resulting from changes to access, amenity and demand. This includes community infrastructure in the local study area identified throughout sections 6.1.3 and 6.2 such as education, health, cultural and recreational facilities as well as emergency services including police, ambulance and fire and rescue.

### **7.7.1 Impacts due to land requirement**

#### ***Narrabri Dirt Bike Club***

As discussed in section 6.2.5 a portion of the Narrabri Dirt Bike Club site would be affected by land requirements for the proposed rail infrastructure, as well as temporary lease of land required to accommodate construction activities. These areas include sections of a grass track located on the eastern side of the property, and the existing access to the facility.

Consultation with the club indicated concern about the capacity of the club committee members to negotiate the changes to the grass track. As a volunteer organisation, the club was concerned they may not have the time required to negotiate reconfiguration of the grass track as it would require a re-design process that would need to be approved by the club committee, as well as working with Council and ARTC. The club also raised concern about losing members if they needed to close the grass track.

Mitigation measures are provided (see section 10)

#### ***Baradine Showground***

Baradine Showground has been identified by Warrumbungle Shire Council as a preferred location for a temporary workforce accommodation facility (section 6.2.2). The north-west section of the showgrounds site would be temporarily leased for the facility. Social Assessment consultation with Baradine Showground Trust indicated the nominated area is not actively used by the showground, however it is adjacent to Camp Cypress which is also located on the showground site. The potential impacts on users of Baradine Showground are discussed in section 7.7.2.

### **7.7.2 Impacts due to amenity and access changes**

Community facilities and services that are within close proximity to temporary workforce accommodation facilities, construction activities, and construction access routes are likely to experience amenity and access changes. These are discussed below.

#### ***Facilities close to temporary workforce accommodation facilities***

There is potential for users of community infrastructure located in close proximity to temporary workforce accommodation facilities to be affected by amenity and access changes. This includes users at Baradine Showground and Jack Towney Hostel (discussed in section 6.1.3).

Social Assessment consultation with Baradine Showground Trust found that most users of Baradine Showground are not expected to be affected by the proposed Baradine temporary workforce accommodation facility. As discussed in section 6.2.4, there are four regular users of the showground site. This includes the annual Baradine Agriculture Show, an annual camp drafters event, and the local school which leases an area at the southern end of the showground to graze cattle. Consultation indicates that due to the infrequent nature of these events, and given the nominated area for the temporary workforce accommodation facility is not actively used, they are not expected to be affected by the facility.

However, given the proximity of Camp Cypress to the proposed location, and the semi-regular use of Camp Cypress throughout the year, there is potential for visitors staying at Camp Cypress to experience amenity changes during construction (eg noise, dust, traffic) and operation of the facility (eg noise and views of the facility). Consultation also found there is potential for vehicles entering and exiting the facility to affect access to Camp Cypress, as there is only one driveway in and out of the showground site. Consultation indicates that provision of a separate driveway would help to reduce interrupted access.

Increased noise and visual changes from the Gilgandra temporary workforce accommodation facility may affect users of Jack Towney Hostel due to its close proximity. As discussed in section 6.2.2, the hostel is an aged care facility for Aboriginal and Torres Strait Islander people. Social Assessment consultation with Jack Towney Hostel and Gilgandra Shire Council indicates that hostel residents and other private residents nearby may be concerned about impacts resulting from establishment of the facility, such as noise, dust and traffic. There may also be concerns related to operation of the facility, such privacy and security concerns due to proximity of the facility to the hostel and presence of the workforce close to the hostel and private residences. Consultation indicated early and regular communication with the hostel and Council would be important to ensure the facility is designed to address these issues, and residents are informed about construction activities and timing.

The design of the temporary workforce accommodation facilities would include noise and visual screening, where reasonable and feasible, to minimise the potential for noise and visual impacts if required.

#### ***Facilities close to construction activities***

Facilities located close to construction activities, which may have the potential to experience construction noise and vibration, dust, and visual changes, include:

- Narrabri Dirt Bike Club – located partially within the proposal site.
- Bohena Creek Rest Area – located adjacent to construction area about 16 kilometres south of Narrabri on the Newell Highway.
- Narromine Golf Course – located about 300 metres from the proposal site.
- Pilliga forests – part of the proposal site is located within State forests between Baradine and Narrabri.
- Macquarie River (including Three Mile Reserve) – a new bridge would be constructed over the river near Narromine.

The potential impacts on users of these facilities and recreation areas are discussed below.

### **Narrabri Dirt Bike Club**

Given the proximity of Narrabri Dirt Bike Club to construction activities, the users of the club could potentially be affected by increased noise, vibration and dust. However Social Assessment consultation confirmed that, given the nature of the sport which creates noise and dust, these amenity changes are not expected to affect use of the club. Access to the club would have the potential to be affected due to temporary road closures and/or diversions during bridgeworks over the Kamilaroi Highway and access road reconfiguration. As a result, access to the club may need to be relocated and this would be negotiated with the club and project team during detailed design. Access would be maintained and is not expected to deter users.

### **Narromine Golf Course**

Narromine Golf Course is located within close proximity to the Narromine West connection, with the south-west sections of the course located around 300 metres from construction activities. Increased noise and dust from construction activities could affect users of the course, particularly when they are using the portion of the course which is closest to the construction works. The *ARTC Inland Rail Narromine to Narrabri Noise and Vibration Assessment – Construction and Other Operations* (JacobsGHD, 2020f) report found that noise impacts could be audible to highly intrusive in some sections. However, construction works at this location would be relatively limited and short term. These temporary amenity changes could reduce some user's enjoyment of the course when works are occurring, and potentially deter some users from visiting the facility at times.

### **Pilliga forests**

Parts of the Pilliga forests would be required for construction of new rail infrastructure, which would required clearing of native vegetation. The Pilliga is used for recreational purposes such as bushwalking, birdwatching, four wheel driving, and hunting, and there are several picnic areas in the forest as well as historical sites. Social Assessment consultation with LALCs identified there would also be Aboriginal people that use the forest for a range of purposes.

Recreational users of the forests could be affected by construction activities. For example, several picnic areas are located close to or may have views of construction activities. This includes the Salt Caves Picnic Area, which is located about nine kilometres from the proposal site at the closest point. The *ARTC Inland Rail Narromine to Narrabri Landscape and Visual Assessment* (JacobsGHD, 2020c) reports that views from the Salt Caves Picnic Area would not be affected by construction activities and vegetation clearing. The *ARTC Inland Rail Narromine to Narrabri Non-Aboriginal Heritage Assessment and Statement of Heritage Impact* (JacobsGHD, 2020h) reports that two sites with the potential for heritage significance, which include picnic areas, are located close to construction activities. These include "The Aloes" homestead and graves, which is around 500 metres from the proposal site, and Rocky Creek Mill site, which is on the opposite side of Pilliga Forest Way from the proposal site. While these potential heritage items would not be impacted by the proposal, visitors to these sites and users of the picnic areas could experience reduced amenity when construction activities occur.

Some users of the forest in areas close to construction activities and undertaking activities that rely on a peaceful environment, such as birdwatching, bushwalking and picnicking, could experience reduced enjoyment. However, given the size of the forests, it is expected most users could undertake activities in other areas and would therefore not be deterred from visiting. However, there would be some users who are more sensitive to impacts, such as local Aboriginal people.



### **Three Mile Reserve**

Social Assessment consultation identified that the Macquarie River is heavily used for recreational activities when it is full, and it holds cultural significance for the local Aboriginal community. This includes the informal recreation area known as Three Mile Reserve, which is a swimming area on the Macquarie River outside of Narromine popular with local Aboriginal residents.

A new bridge would be constructed over the Macquarie River adjacent to Three Mile Reserve. Users of the reserve and river could experience decreased amenity due to noise, vibration, dust and visual impacts. The *ARTC Inland Rail Narromine to Narrabri Noise and Vibration Assessment – Construction and Other Operations* (JacobsGHD, 2020f) indicates that construction noise impacts would be noticeable through to highly intrusive at the reserve. The *ARTC Inland Rail Narromine to Narrabri Landscape and Visual Assessment* (JacobsGHD, 2020c) also reports there would be a moderate impact to views during construction of the bridge.

Construction of the bridge may reduce the amenity of the reserve, and user's enjoyment of the river in this location. There is potential for some users of the reserve to be deterred from using the area when some construction activities are taking place. Local Aboriginal communities and users of the waterways may be more sensitive to these changes.

### **Facilities on access routes**

As shown in Figure 6.1 to Figure 6.5 there are a range of community facilities and services located on construction access routes. There is potential for users of these facilities to be affected by intermittent amenity impacts, such as increased noise due to increases in heavy vehicle traffic.

The extent of these potential intermittent amenity impacts on users of facilities would depend on the frequency of heavy vehicle movements, and the sensitivity of users of facilities. For example, facilities such as child care centres, schools and health facilities serve vulnerable community members and may be more sensitive to increased heavy vehicles.

The *ARTC Inland Rail Narromine to Narrabri Noise and Vibration Assessment – Construction and Other Operations* (JacobsGHD, 2020f) indicates that increased noise due to heavy vehicles on main roads would generally not be noticeable because these facilities would already be exposed to heavy vehicle traffic. As such, it is anticipated that users of these facilities would be less sensitive to these amenity. The report also notes that increased noise on local roads would occur less frequently as there would be a low volume of heavy vehicle traffic. Therefore users of facilities on access routes are not expected to be impacted.

### **General access changes**

As discussed in section 7.6, increased construction traffic would be temporary and incremental, therefore a negligible impact is expected to occur on the local road network. Despite this, people accessing community facilities and services in towns near the proposal site may experience some minor delays and detours. This may lead to inconvenience but it not expected to reduce access to community services and facilities.

### **Other facilities**

Other social infrastructure that could be affected by construction activities include Narromine Clay Target Club and Siding Springs Observatory.

Narromine Clay Target Club is a gun range located north of the town of Narromine about 700 metres west of the proposal site. Given the distance from construction activities and the nature of the sport which produces loud noises, construction activities are not expected to affect users of the club.

Siding Springs Observatory is a key attractor for the region and provides research and recreational access to the Dark Sky Region as discussed in section 6.2.4. Although located 30 kilometres from the proposal, light generated as a result of construction activities has the potential to impact the Dark Sky Region centred above the observatory. The *ARTC Inland Rail Narromine to Narrabri Landscape and Visual Assessment* (JacobsGHD, 2020c) indicates that potential light pollution during construction activities is not expected to be significant as night-time work would be minimal and lighting at construction camps would be managed in accordance with relevant controls and guidelines. Users of this facility are therefore not expected to be impacted.

### **7.7.3 Changes to service provision**

The temporary construction workforce has the potential to increase demand for community services and recreational facilities, particularly in the towns hosting temporary workforce accommodation (Narromine, Gilgandra, Baradine and Narrabri). It is expected that most local services and facilities, such as recreational facilities, would have capacity to meet increased demand. However Social Assessment consultation indicates there are varying levels of capacity in local and regional health services to meet increased demand that may occur during construction (see section 4). As discussed in section 6.4.4 there are existing challenges for local health service delivery such as long wait times for GPs, and larger centres in the region are better resourced with health and wellbeing services and facilities. There is potential for the construction workforce to exacerbate these challenges in host towns and potentially reduce availability and access to medical and health services for local residents.

Social Assessment consultation with emergency services in the Central West region (section 5.2.6) indicated that emergency services did not anticipate much increased demand as a result of construction of the proposal given they had not experienced any increased demand due to construction of the Parkes to Narromine section of Inland Rail. However some representatives mentioned there may be need to increase staffing levels at some of the smaller towns, and they would need to be kept updated with information about the proposal to ensure adequate resourcing. Construction safety procedures would be implemented as part of construction management, to minimise potential safety incidents on the proposed construction work sites. First aid and safety officers would be available on construction work sites and temporary accommodation facilities to attend to minor construction incidents to minimise the demand for local emergency services and health facilities.

Emergency services could also be impacted due to construction activities such as changes to road conditions, which could increase emergency response times. The *ARTC Inland Rail Narromine to Narrabri Traffic and Transport Assessment* (JacobsGHD, 2020b) reports that access for emergency vehicles would be maintained along the public road network throughout the construction period, with suitable alternative access arrangements provided where required. Emergency services would also be consulted regularly to minimise impacts of the proposal.

Emergency services could also experience increased demand due to changes to flooding conditions. The *ARTC Inland Rail Narromine to Narrabri Flooding and Hydrology Assessment* (JacobsGHD, 2020d) reports that appropriate management measures would be required during construction to manage flooding impacts on construction workers and activities, waterways and water flows. Construction activities, such as vegetation removal and construction of new infrastructure, also has the potential to impact the geomorphological condition and stability of waterways. Emergency services would continue to be consulted about flooding modelling and mitigation during detailed design and construction.

## 7.8 Summary of key findings

The assessment of potential social impacts presented in section 7 considers the implementation of mitigation measures recommended in other technical reports identified in section 10.

Potential benefits and impacts during construction are listed in Table 7.1.

The key social benefits expected to occur during construction are summarised below:

- expansion of the regional Construction sector, Professional, Scientific and Technical Services sector, and Wholesale Trade sector due to direct and indirect employment opportunities
- increased demand for goods and services would provide procurement opportunities for local and Indigenous businesses to subcontract to the primary construction contractor
- some businesses in regional towns hosting temporary workforce accommodation facilities may benefit from non-resident construction workforce spending wages
- construction employment opportunities for skilled workforce in the region, and opportunities for upskilling to meet construction training requirements
- service and maintenance employment opportunities at the temporary workforce accommodation facilities.

The key potential social impacts expected to occur during construction are summarised below:

- Disruption to lifestyles and livelihoods for landholders resulting from land requirements for the proposal, which may disrupt internal property access due to severed or fragmented land, and/or temporary lease of land. This may reduce efficiency and viability of farming operations, increase costs, and require changes to farming practices.
- Uncertainty and stress for some landholders affected by land requirements for the proposal, leading to individual and community wellbeing impacts for some.
- Reduced amenity for residents and community members in close proximity to construction activities, which may interrupt people's daily activities and impact community values related to rural amenity.
- Some amenity impacts for residences and community facilities in close proximity to temporary workforce accommodation facilities, and impacts associated with a non-resident construction workforce, such as demand on local services and potential wellbeing concerns.
- Minor delays and disruptions due to construction traffic and temporary changes to road conditions, which may increase travel times.
- Potential impacts on Narrabri Dirt Bike Club, which would be subject to partial land requirements.
- Potential impacts on emergency services due to changes to access and road conditions.

**Table 7.1 Social impact summary table – construction**

Potential impact description	Stakeholders affected	Nature, type and duration	Likelihood	Consequence	Risk / benefit rating
<b>Industry and business</b>					
The Construction sector, Professional, Scientific and Technical Services sector, and the Wholesale Trade sector would expand during construction due to direct and indirect employment opportunities of employment. This is expected to benefit the regional economy and provide additional employment opportunities for regional and local communities.	Regional Construction sector, Professional, Scientific and Technical sector, Wholesale trade sector	Positive Direct Short term	Almost certain	Moderate	Extreme
Increased demand for goods and services would benefit local and Indigenous businesses through subcontracting to the primary construction contractor, including supplying temporary workforce accommodation facilities. However there are existing barriers and challenges to participation for local and Indigenous businesses in the region.	Local and Indigenous businesses in the local and regional study area	Positive Direct Short term	Possible	Minor	Moderate
Economic benefits due to the non-resident workforce spending money in regional towns hosting temporary workforce accommodation facilities when not on shift. Businesses likely to benefit include food and beverage, hospitality and retail. However there is potential for workers to travel to larger centres such as Dubbo, especially those in the southern end of the study area.	Businesses located in towns in the local and regional study area close to temporary workforce accommodation facilities (eg Narromine, Gilgandra, Baradine, Narrabri and Dubbo)	Positive Indirect Short term	Possible	Minor	Moderate

Potential impact description	Stakeholders affected	Nature, type and duration	Likelihood	Consequence	Risk / benefit rating
<b>Employment, workforce and training</b>					
<p>Construction employment opportunities for skilled workforce in the regional study area, particularly labourers, tradespeople, machinery operators, engineers, surveyors and site supervisors. ARTC is committed to creating opportunities for development of local workers, however there are a number of challenges that would need to be considered to fulfil these commitments including:</p> <ul style="list-style-type: none"> <li>• Skills shortage in the study area which could limit the ability of the proposal to deliver local employment opportunities. However there are many local farmers seeking alternate income who would have relevant skills for construction work.</li> <li>• The youth labour force fluctuates and many younger people leave the region.</li> <li>• Females in the study area have lower rates of unemployment than males.</li> <li>• There are high levels of unemployment and barriers to employment for Indigenous people.</li> </ul>	Skilled and unskilled workforce in the local and regional study area	Positive Direct Short term	Likely	Moderate	High
Potential for upskilling of the local workforce through the provision of training during construction which would provide longer-term benefits for these workers.	Workforce in the local and regional study area	Positive Direct Long term	Possible	Minor	Moderate
Indirect employment opportunities as a result of construction in Professional, Science and Technical Services and Wholesale Trades.	Workforce in the local and regional study area	Positive Direct Short term	Likely	Moderate	High



Potential impact description	Stakeholders affected	Nature, type and duration	Likelihood	Consequence	Risk / benefit rating
<b>Property and landholder impacts</b>					
Potential for disruption to internal property access due to severed/fragmented land as a result of permanent partial property acquisitions, and/or temporary lease of land for construction infrastructure. This may reduce efficiency and viability of farming operations on affected properties, increase operating costs associated with the movement of livestock and/or farm machinery within the property, and require changes to current farming practices.	Landholders in the local study area affected by property acquisition	Negative Direct Long term	Likely	Moderate	High
Uncertainty and frustration leading to stress for some landowners facing changes due to property impacts, with potential implications for individual health and wellbeing. This has likely been compounded by the prolonged drought conditions in the region and the economic shock of the COVID-19 pandemic, which has placed increased pressure on landholders and those dependent on their properties for household income.	Landholders in the local study area affected by property acquisition	Negative Direct Long term	Likely	Major	Extreme
Potential for disruptions to day-to-day family life for occupants of properties near construction activities eg changes to school bus services, mail deliveries, utility changes.	Landholders in the local study area	Negative Direct Short term	Possible	Moderate	High
<b>Housing and accommodation</b>					
Given that the workforce accommodation is expected to be sufficient for the peak workforce if required, it is expected that the majority of non-resident workforce would stay in the temporary workforce accommodation facilities. However, the proposal may increase some demand for local tourist accommodation facilities during the design and construction phase as ARTC and specialist workers access the proposal site for short-term periods. The potential minor increase in demand for tourist accommodation would generate a positive impact for local accommodation service providers, and is unlikely to restrict the usual demand for accommodation in the region.	Accommodation providers in the local study area	Positive Direct Short term	Unlikely	Minimal	Low

Potential impact description	Stakeholders affected	Nature, type and duration	Likelihood	Consequence	Risk / benefit rating
There is potential for some non-resident workers to choose to rent homes in the study area rather than stay in the temporary workforce accommodation, and this is most likely to occur in host towns. This demand is likely to be small and subject to availability of rental accommodation at a reasonable price. There are varying levels of availability of rental properties and varying housing vacancy rates across the host towns, and housing is generally affordable across the study area. It is unlikely that such minor demand for rental accommodation would increase the price of rental properties in these locations.	Communities in the local study area	Negative Indirect Short term	Unlikely	Minor	Low
<b>Local amenity, community values and wellbeing</b>					
Potential for reduced amenity due to increased noise and vibration for residents in close proximity to construction activities. This may interrupt people's day-to-day activities, and some residents may experience night-time noise at times, which has the potential to cause sleep disturbance. Night-time noise would occur intermittently.	Landholders and residents in the local study area close to works along the proposal area	Negative Direct Short term	Possible	Minor	Moderate
Potential for residents in Gilgandra close to the temporary workforce accommodation facility to experience increased noise due to establishment and use of the facility.	Residents in the local study area living close to temporary workforce accommodation facilities in Gilgandra and Baradine	Negative Indirect Short term	Possible	Minor	Moderate
Some residents living in close proximity to construction activities may spend more time cleaning and washing surfaces. Vulnerable groups (eg people with asthma, elderly) may be more sensitive to dust.	Residents in the local study area living in close proximity to construction works	Negative Direct Short term	Possible	Minor	Moderate

Potential impact description	Stakeholders affected	Nature, type and duration	Likelihood	Consequence	Risk / benefit rating
Changes to visual amenity from construction activities and infrastructure may impact on community values relating to the rural landscape and reduce the enjoyment of private properties for some residents. Some residents may be impacted by a loss of privacy due to the proximity of workers to their properties, particularly where temporary workforce accommodation would be located near residential areas in Gilgandra.	Landholders and residents in the local study area close to works, residents close to temporary accommodation facilities	Negative Direct Short term	Possible	Minor	Moderate
Strongly held unsupportive views about the proposal by affected landholders and the general community are likely to cause increased stress and anxiety in the community, and given the long planning, design and approval timeframes of the proposal such impacts can be experienced by some community members over an extended period of time, affecting mental health and wellbeing for some. These potential impacts, when compounded with the impacts of other factors affecting the regional community such as the recent drought, bushfires and COVID-19 pandemic, have the potential to exacerbate feelings of stress and anxiety related to the proposal.	Landholders and communities in the local study area	Negative Indirect Short to long term	Likely	Moderate	High
Potential for the associated perception of anti-social behaviour and safety concerns for locals due to a temporary increase in the male population of the towns of Narromine, Gilgandra, Baradine and Narrabri. Some residents, and residents of Jack Towney Hostel, may be more sensitive to perceived impacts.	Residents in the local study area living in Narromine, Gilgandra, Baradine and Narrabri Jack Towney Hostel residents	Negative Indirect Short term	Unlikely	Minor	Low
Literature indicates that non-resident workforces are at greater risk of mental ill health than local workers undertaking similar work, and this is primarily related to isolation and loneliness.	Non-resident construction workforce	Negative Indirect Short term	Possible	Moderate	High

Potential impact description	Stakeholders affected	Nature, type and duration	Likelihood	Consequence	Risk / benefit rating
Potential for community values associated with Aboriginal and non-Aboriginal cultural heritage to be affected by construction activities due to impacts to places of cultural significance and/or heritage items.	Local study area communities	Negative Direct and indirect Short term	Possible	Minor	Moderate
<b>Access and connectivity</b>					
Construction traffic and temporary changes to road conditions may result in minor delays and disruptions, increasing travel times for some road users.	Road users in the local study area	Negative Direct Short term	Possible	Minimal	Low
Potential for increase in actual and perceived road safety risks due to construction traffic. Shuttle buses would be used to transport temporary construction workforce to reduce the number of vehicles using local roads.	Communities in the local study area	Negative Direct Short term	Unlikely	Minor	Low
Potential for delays and disruptions affecting school bus routes, as well as perceived safety risks due to construction traffic on school bus routes. This may occur in Narromine, Narrabri and Curban where the proposal site crosses school bus routes or where school bus routes are also construction vehicle routes in some places.	School bus services and users in the local study area particularly Narromine, Curban and Narrabri	Negative Direct Short term	Unlikely	Minor	Low
<b>Impacts on social infrastructure</b>					
Narrabri Dirt Bike Club would be impacted by the land requirements for rail infrastructure as well as temporary lease of land during construction. This would affect sections of the grass track and access to the facility. As a volunteer organisation, the club is concerned about the resources and time required to negotiate reconfiguration and design of the track, and potential loss of members if the grass track was closed	Narrabri Dirt Bike Club	Negative Direct Long term	Almost Certain	Moderate	Extreme
Potential for amenity and access impacts to users of Baradine Showgrounds due to the location of temporary workforce accommodation facility within the showgrounds.	Users Baradine Showground	Negative Direct Short term	Possible	Minor	Moderate

Potential impact description	Stakeholders affected	Nature, type and duration	Likelihood	Consequence	Risk / benefit rating
Potential noise, dust and traffic impacts during facility establishment for residents of Jack Towney Hostel, which is adjacent to the proposed Gilgandra temporary workforce accommodation facility. Proximity of the facility to the hostel as well as the presence of workers may also lead to concerns about privacy and security for residents. The hostel caters to Aboriginal and Torres Strait Islander seniors, who may be more sensitive to these impacts.	Jack Towney Hostel residents	Negative Indirect Short term	Possible	Moderate	High
Increased noise and dust from construction activities could affect enjoyment of Narromine Golf Course for some users at times. However, construction works at this location are expected to be limited, and any impacts would be temporary.	Narromine Golf Club and customers	Negative Direct Short term	Possible	Minimal	Low
Some users of the Pilliga forests close to construction activities and undertaking activities that rely on a peaceful environment, such as birdwatching, bushwalking and picnicking, could experience reduced enjoyment. However given the size of the Pilliga forests, it is expected that most users could undertake activities in other parts of the forest and would therefore not be deterred from visiting the forest. However, there would likely be some users who are more sensitive to impacts on the forest, such as local Aboriginal people.	Users of Pilliga forests	Negative Direct Short term	Possible	Minor	Moderate
Construction of the Macquarie River bridge near Narromine may reduce the amenity of Three Mile Reserve, which is a popular swimming area and has significance to the local Aboriginal community. User's enjoyment of the river in this location could be affected, and there is potential for some users of the reserve to be deterred from using the area when some construction activities are taking place. Local Aboriginal communities and users of the waterways may be more sensitive to these changes.	Users of Three Mile Reserve	Negative Direct Short term	Possible	Minor	Moderate



Potential impact description	Stakeholders affected	Nature, type and duration	Likelihood	Consequence	Risk / benefit rating
Potential for the non-resident construction workforce to access community services and recreational facilities in towns hosting temporary workforce accommodation facilities. It is expected that most services and facilities would have capacity to meet the increased demand. However the baseline indicates there may be some existing challenges for local health service provision, such as long wait times for local GPs. There is potential for the construction workforce to exacerbate these challenges in host towns of Narromine, Gilgandra, Baradine and Narrabri. Social Assessment consultation also indicates some local emergency services may need to increase staffing levels in host towns.	Local medical and emergency services in Narromine, Gilgandra, Baradine and Narrabri.	Negative Direct Short term	Possible	Minor	Moderate
Potential increase to emergency service response times due to changes in access and road conditions, however, access would be maintained for emergency vehicles along the public road network during construction, with suitable alternative access arrangements provided where required.	Regional and local emergency services	Negative Direct Short term	Possible	Minor	Moderate
Potential for increased demand on emergency services due to risks associated with changes to flooding conditions as a result of construction activities.	Regional and local emergency services	Negative Direct Short term	Possible	Minor	Moderate

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## 8 Social impact assessment – operation

This section provides a detailed description and assessment of potential social impacts that may result from operation of the proposal. Impact identification and description has been informed by various sources of information as described in section 3.2. Potential impacts have been assessed in accordance with the impact assessment methodology in section 3.2.

### 8.1 Economic development, industry and business

The *ARTC Inland Rail Narromine to Narrabri Agriculture and Land Use Assessment* (JacobsGHD, 2020a) estimates that the potential economic impact of the permanent removal of agricultural land is estimated to be a loss of about \$1.54 million per year, which is equivalent to about 0.16 per cent of the annual value of agricultural production in the regional study area. However, the economic benefits assessment reported in the *ARTC Inland Rail Narromine to Narrabri Economic Assessment* (KPMG, 2020) estimates that the proposal is expected to provide a total of \$258.9 million in incremental benefits, which offsets the per annum loss of agricultural production. These benefits result from improvements in freight productivity, reliability and availability, and benefits to the community from crash reductions, reduced environmental externalities and road decongestion benefits. Observing the composition of benefits, the largest share of benefits for the proposal is improved availability of freight, representing about 62 per cent of the total benefits. Agricultural industries in the regional study area would have the potential to benefit from improvements in supply chain efficiency. In particular, the proposal would increase competition between road and rail freight modes, driving savings in freight costs, which would benefit producers, consumers and the regional community.

The future development of regional intermodal terminals and other complementary infrastructure is expected to be largely driven by market opportunities identified by private investors (Australian Government Department of Infrastructure, Transport, Regional Development and Communications, n.d.). As discussed in section 6.2.6, Narrabri Shire Council has prepared a business case for a freight and logistics terminal to capitalise on the opportunities Inland Rail would provide. An intermodal terminal is also proposed for Parkes, which is about 100 kilometres south of Narromine. If these developments occur, regional agricultural producers would be able to move products more efficiently for domestic use and export, and potentially reduce associated transport costs.

During operation it is also expected there would be some opportunities for local businesses to supply ARTC to assist with rail operations and maintenance. ARTC would provide opportunities for local procurement in accordance with the *Australian Jobs Act 2013* and Australian Industry Participation National Framework, and through the Inland Rail Academy.

### 8.2 Employment, workforce and training

The day-to-day operation of the proposal is anticipated to require a workforce of up to ten people for maintenance and inspection activities. These would be skilled roles requiring qualifications in railway maintenance.

As indicated in section 6.4.3, there are a number of existing initiatives aimed at attracting skilled workers to the region. Training programs offered by training providers and targeted initiatives by ARTC are also aimed at upskilling the local workforce (see section 6.4.4). These programs and initiatives would support local residents in gaining the skills and qualifications required for the operation phase, allowing operational jobs to be filled by local residents and helping to maximise the proposal's operational benefits for local employment. There is also potential for these roles to attract skilled workers to the region, which would support objectives of regional development bodies and councils (see section 2).

Indirectly, operation of the proposal could support opportunities for regional employment within agricultural and freight and logistics industries. However, the *ARTC Inland Rail Narramine to Narrabri Economic Assessment* (KPMG, 2020) does not assess the indirect employment that would be generated by the proposal in the region, therefore it is not possible to estimate the number of indirect employment benefits during operation of the proposal.

### **8.3 Property and landholder impacts**

Subject to detailed design, land requirements for the proposal's operational infrastructure would directly impact about 274 properties (142 privately-owned properties and 132 publicly-owned properties), the majority of which would be subject to partial land requirements.

During operation, landholders of properties that are severed due to the proposal's land requirements may experience disruptions to internal property access, potentially impacting farming operations and operating costs, and requiring changes to current farming practices, including for the movement of stock and machinery across the rail corridor. These issues were identified as key concerns for property owners during EIS and Social Assessment consultation (section 4). The potential impacts of the proposal's operation on farming properties and rural land uses are considered in the *ARTC Inland Rail Narramine to Narrabri Agriculture and Land Use Assessment* (JacobsGHD, 2020a).

Consultation for the EIS identified concerns from some property owners about the potential for the proposal to change flooding of their property. The *ARTC Inland Rail Narramine to Narrabri Flooding and Hydrology Assessment* (JacobsGHD, 2020d) reports that operation of the proposal would result in some minor changes to existing flood behaviour that has the potential to impact flooding to existing buildings and agricultural cropping and grazing areas. The potential impact of the proposal on flooding to existing buildings is most apparent at Narramine and Narrabri, while the impact on agricultural land uses is generally negligible. Mitigation measures are provided to minimise these potential impacts.

The proposal would require changes to the private road network where the rail corridor crosses existing accesses on private properties. The design of the proposal considers relevant safety standards and requirements, including fencing of the corridor, as required, to manage potential safety risks relating to livestock and access to the rail corridor. ARTC would consult with individual landholders affected by these changes during the property acquisition process.

These changes would have the potential to affect access and connectivity for landowners within some properties, impacting on the distances and time required for travel. The potential impacts of these changes on farming operations are considered in section 7.3.1 and the *ARTC Inland Rail Narramine to Narrabri Agriculture and Land Use Assessment* (JacobsGHD, 2020a).

### **8.4 Housing and accommodation**

Once operational, the proposal is expected to require a workforce of up to 10 people for maintenance and inspection activities. It is expected that these positions would mainly be filled by skilled residents in the study area, particularly given the programs discussed in section 6.4.4 to upskill local residents to take advantage of proposal-related employment opportunities. These roles could also attract skilled residents to live in the regional study area. As such, there is not expected to be any increased demand for housing and accommodation as a result of operation.

### **8.5 Local amenity, community values and wellbeing**

This section describes the potential social impacts that may occur due to changes to amenity in the study area during operation, which may affect the quality of life and values of community members. Changes to amenity relate to changes in noise and vibration levels, visual amenity and air quality.

### 8.5.1 Noise, vibration and air quality

This section draws from the findings of *ARTC Noise and Vibration Assessment – Operational Rail* (SLR, 2020). As identified in that report, during operation there may be changes to amenity in the local study area resulting from operation of trains, and the presence of rail infrastructure. Properties located in close proximity to the proposed rail corridor may experience increased noise, vibration and dust due to train operations, including:

- movement of train wagons
- locomotive noise
- curving noise and braking
- idling of trains at crossing loops
- bunching or stretching of wagons
- operation of warning bells/alarms at level crossings
- use of train horns by train operators.

It is expected that amenity changes resulting from train operations would be intermittent throughout the day, with an average of 10 trains per day (both directions) in 2025, increasing to about 14 trains per day (both directions) in 2040. Noise and vibration caused by idling trains may be experienced for longer durations at properties near crossing loops at Burroway, Balladoran, Curban, Black Hollow/Quanda, Baradine, The Pilliga, and Bohena Creek/Narrabri and where there are turn-outs.

The report assumes that about one in four trains would be required to access the crossing loop in each daytime and night-time period. At a crossing loop, the train would come to a complete stop and idle until it can return to the main track. Each train could be held in the crossing loop for up to one hour to allow for a second train to pass in the other direction. However, given the crossing loop is within 4.5 metres of the mainline track, it is not expected to be the primary influence on the overall daytime and night-time noise levels. Noise would also be caused by signals at active level crossings, which would be dominant for up to 20 seconds prior to a train passing and masking the alarm signal sound.

The report found there are 40 receivers where the airborne railway noise levels were predicted to be above the assessment criteria and triggered the investigation of noise mitigation measures in 2025, and an additional 26 receivers in 2040 when the number of trains increase. At most receivers, noise from train operations (rolling noise) is the dominant noise source.

The report also assessed potential vibration and ground-borne noise that may result from daily train passbys on the proposal. The report found there are five receivers identified within approximately 50 metres of the proposal site. The ground-borne noise and vibration levels will be further assessed during detailed design and construction stages of the proposal.

Increased noise from trains may cause annoyance at times for the residents of dwellings identified above, potentially disrupting activities such as reading, listening to the radio and watching television. Additionally, train operations may disturb the night-time peacefulness for nearby properties. The report found the predicted noise levels were above the maximum noise criteria within the night-time period at 39 receivers. The maximum criteria is generally achievable where receivers are located further than 400 metres from the rail corridor.

Night-time noise has the potential to cause sleep disturbance for some people. Guidance on sleep disturbance from the World Health Organisation, suggest sleep quality can be preserved where internal noise levels are not above a maximum level of 42 decibels. The report found that noise levels could be above the maximum criteria within about one kilometre of the rail corridor. This distance is a guide to where night-time noise levels may have the potential to result in sleep disturbance impacts. Individuals respond to noise differently, and just because rail noise can be audible does not mean it would cause disturbance or annoyance impacts. Sleep disturbance can lead to tiredness for some people, potentially affecting people's moods and personal relationships, ability to concentrate on work and other activities, and health and well-being. These impacts can be greater on vulnerable groups who may be more sensitive and have less capacity to adapt to potential noise impacts and impacts relating to sleep disturbance.

As the design progresses, the proposal would continue to be refined to minimise the potential for operational impacts. The airborne noise, ground-borne noise and vibration levels would continue to be assessed during detailed design. ARTC would adopt reasonable and feasible measures to reduce railway noise and vibration impacts for identified receivers, which are expected to include at-property controls, such as architectural property treatments and upgrades to property fencing. This is predicted to mitigate increased noise levels for affected residents.

The *ARTC Inland Rail Narromine to Narrabri Agriculture and Land Use Assessment* (JacobsGHD, 2020a) also indicated noise associated with train activities may affect the grazing patterns of livestock. However, livestock would adapt to noise over time and, although grazing patterns may be altered, productivity is not anticipated to be affected.

An assessment of potential air quality impacts during operation identified there would be negligible air quality impacts resulting from regular train movements. Additionally, while reduced air quality may occur for up to 25 metres as a result of trains idling at crossing loops, there were no identified properties within 25 metres of the crossing loops; therefore, impacts are expected to be negligible. Further detail about potential air quality impacts of the proposal are provided in chapter B10 of the EIS.

### **8.5.2 Visual amenity**

The landscape and visual amenity of areas in close proximity to the proposal would be permanently changed as a result of rail infrastructure and train operations including:

- rail infrastructure such as concrete sleepers and track, fencing, signals along the length of the alignment
- 73 new bridges and numerous culverts where the alignment intersects existing rail lines, roads, water ways and flood ways
- train movements.

The *ARTC Inland Rail Narromine to Narrabri Landscape and Visual Assessment* (JacobsGHD, 2020c) found there would be a range of potential visual impacts during operation depending on the location of viewpoints. Although the proposal passes through long stretches of agricultural land with occasional townships and settlements there would be a number of properties with permanently changed views.



Residents/occupants with an outlook onto the Macquarie River, Castlereagh River and the Narrabri Creek / Namoi River crossings may experience visual impacts due to a view of the proposed bridges. The *ARTC Inland Rail Narromine to Narrabri Landscape and Visual Assessment* (JacobsGHD, 2020c) indicates that these watercourses make a significant contribution to the landscape character of the regional area. However, rail and road crossings are typical features within the existing landscape so changes are expected to have a moderate to low impact. Some local community members may perceive visual changes to reduce local amenity and be an interruption of their current views.

Further discussion about potential impacts on visual amenity within the study area is provided in *ARTC Inland Rail Narromine to Narrabri Landscape and Visual Assessment* (JacobsGHD, 2020c).

## **8.6 Access and connectivity**

During operation, potential impacts on local access and connectivity would mainly be associated with changes to public and private roads crossed by the rail corridor.

Road closures and/or diversions may be required at some locations where the rail corridor crosses local public or private roads to mitigate potential safety risks as described in the *ARTC Inland Rail Narromine to Narrabri Traffic and Transport Assessment* (JacobsGHD, 2020b).

Generally, public roads would be retained wherever possible. However, where public roads cross the proposed rail corridor, the road would need to be closed in the following instances:

- the road exists only as a road reserve on paper and is not being used for access purposes
- grade separation and raising/lowering the road is not feasible
- providing a level crossing on the existing road alignment would not be possible
- there is a nearby grade separation or level crossing enabling diversion of the road.

Four public roads would be closed, as described in section A7.4.2 of the EIS, with the following alternate arrangements:

- Dappo Road – alternative access is available via the existing Webbs Siding Road.
- Brooks Road – alternative access to National Park Road would be provided via a road realignment to connect with a new level crossing about 900 metres south of the existing intersection.
- Nalders Access Road – alternative access to National Park Road would be provided via a road realignment to connect with a new level crossing about 2.6 kilometres south of the existing intersection.
- Munns Road – access across the proposal site would be provided via a road realignment to connect with a new level crossing.

Local road closures may change the route some people need to use to access properties, local towns and other destinations, potentially increasing the travel distances and journey times for some people. Concerns were raised during Social Assessment and EIS consultation about the impacts to travel times and safety as a result of changed road conditions. The *ARTC Inland Rail Narromine to Narrabri Traffic and Transport Assessment* (JacobsGHD, 2020b) found there would be minimal potential impacts for road users resulting from these changes.

The proposal would also involve the introduction of new level crossings on public roads. The findings of the *ARTC Inland Rail Narromine to Narrabri Traffic and Transport Assessment* (JacobsGHD, 2020b) indicated that new level crossings may increase travel times. An assessment of potential delays noted that at Castlereagh Highway, which is the busiest location at which a level crossing is proposed, there would be a maximum delay of 96 seconds. The study found that overall these delays would be minor.

Concerns about potential changes to school bus routes were identified during consultation for the EIS. Access would be maintained for school buses near the proposal site, although delays at level crossings could lead to minimal increased travel time for some routes. This would be managed through consultation with local schools and bus operators to inform their timetable and route planning (JacobsGHD, 2020b).

Operation of the proposal would present a number of potential risks to health and safety for local communities, including risks to pedestrians, motorists and livestock from collisions with trains at level crossings, possible security risks associated with access to the rail corridor, and train derailment. Safety of livestock from the operation of the rail line was identified as a particular concern for some property owners during consultation for the EIS. However, these risks are considered low as the proposal would be designed in accordance with relevant safety standards and requirements. In particular, the corridor would be secured and fenced as required, to manage potential safety risks relating to livestock and access to the corridor for landholders and motorists.

## **8.7 Impacts on social infrastructure**

This section describes the potential social impacts on community infrastructure and services during operation of the proposal resulting from changes to access, amenity and demand. This includes community infrastructure identified in section 6.1.3 and 6.2, such as education, health, cultural and recreational facilities, as well as emergency services including police, ambulance and fire and rescue.

### **8.7.1 Amenity and access changes**

Community and recreation facilities and services in close proximity to the proposal site would have the potential to experience amenity changes as a result of operating trains and maintenance activities. This would include the potential to experience increased noise, vibration and visual changes.

Narrabri Dirt Bike Club would be potentially affected by noise from operating trains, as well as visual impacts. However Social Assessment consultation confirmed that, due to the nature of dirt bike racing, these amenity impacts would not impact the facility or deter users of Narrabri Dirt Bike Club.

The *ARTC Inland Rail Narromine to Narrabri Agriculture and Land Use Assessment* (JacobsGHD, 2020a) found that accessibility of recreational fishing in watercourses crossed by the proposal is unlikely to be affected as the proposal would not affect fish passage and access along watercourses. However, users of waterways such as the Macquarie River at Three Mile Reserve near Narromine would experience changed views due to the presence of the new bridge. The *ARTC Inland Rail Narromine to Narrabri Landscape and Visual Assessment* (JacobsGHD, 2020c) reports that rail and road crossings are typical within the existing landscape; however, as discussed in section 8.5, local Aboriginal communities, adjacent residents and other users of the waterways may be more sensitive to these changes. It is expected that community members would adapt to these visual changes over time and would not be deterred from using the river and reserve.

The *ARTC Inland Rail Narromine to Narrabri Landscape and Visual Assessment* (JacobsGHD, 2020c) found there are no anticipated adverse impacts to the Siding Spring Observatory and the associated Dark Sky Region given the limited output of upward light from freight trains and the observatory's distance from the proposal site.

As discussed in section 8.6, changes to local road networks would be required as a result of the proposed rail corridor. This would include closure of four public roads and the provision of a number of new level crossings. Increased travel times are expected to be minor, and are not expected to affect access to community facilities and services.

### **8.7.2 Changes to service provision**

Local emergency services may experience changes to their service provision resulting from changes to the local and regional road network, and increased safety risks resulting from train operations.

Delays at level crossings could affect emergency vehicles response times, particularly near the towns of Narromine and Narrabri. However, it is expected that the proposed bridges over main roads would assist to avoid delays to emergency services.

Outside of Narromine and Narrabri, level crossings would be mainly located on local roads outside of town centres. As discussed in section 8.6, the level crossing with the greatest delay would be Castlereagh Highway with a maximum predicted delay of 96 seconds. Consultations with local emergency services during detailed design would ensure emergency service providers are aware of accessible routes during operation, particularly alternate routes in the case of level crossing delays.

The *ARTC Inland Rail Narromine to Narrabri Flooding and Hydrology Assessment* (JacobsGHD, 2020d) reports the proposal would result in negligible to minor impacts to the length and duration of flooding to roads and highways, therefore the proposal would not result in any significant impact to existing flood evacuation, road traffic control, and road closure arrangements. Emergency services and councils would be consulted during detailed design regarding emergency management.

The presence of trains may cause a safety risk to drivers at level crossings, including risks associated with illegal crossings while trains are approaching. The presence of trains may impact on community safety, as there would be an increase in the potential for a pedestrian or cyclist to encounter a train, which could potentially result in increased demand on emergency services responding to incidents. The *ARTC Inland Rail Narromine to Narrabri Traffic and Transport Assessment* (JacobsGHD, 2020b) found that the likelihood of an incident occurring is very low given the generally low volumes of traffic within most of the local study area. The proposal would reduce the volume of intercity freight trucks on the Newell Highway with Inland Rail anticipated to remove over 200,000 trucks from the road each year. This would provide a long-term benefit to the community by reducing congestion, improving travel times, road safety and the amenity of local roads and regional towns.

Given the small number of operational jobs in the regional study area there is not expected to be any increased demand for local community services.

## 8.8 Summary of key findings

The assessment of potential social impacts presented in section 8 considers the implementation of mitigation measures recommended in other technical reports identified in section 10. Potential benefits and impacts during construction are listed in Table 8.1.

The key social benefits expected to occur during operation of the proposal are summarised below:

- Improvements in freight productivity, reliability and availability, and benefits to the community from crash reductions, reduced environmental externalities and road decongestion benefits. Agricultural industries in the region will particularly benefit from improvements in supply chain efficiency.
- There may be some opportunities for local businesses to supply ARTC in relation to rail operations and maintenance.
- There may be up to 10 employment opportunities for skilled workforce in the region during operation, or these roles could attract skilled workers to the region.
- Overall improved travel times and road safety by reducing the volume of intercity freight trucks on the Newell Highway.

The key potential social impacts expected to occur during operation of the proposal are summarised below:

- Properties along the alignment may be impacted in varying ways due to new rail infrastructure, such as disrupted internal property access, farming operations and operating costs, or changes to current farming practices.
- Changes to access arrangements within private properties due to closure of private roads, which may increase travel times and routes for property owners, and increase safety risks.
- Amenity changes resulting from operation of trains due to noise, vibration and visual changes, which could affect the way of life for nearby residents and community members.
- Closures of private and public roads may result in changes to the way community members access properties, townships and community facilities and services.
- Potential increased health and safety risks at new level crossings due to possible collisions between trains and pedestrians, motorists and livestock.
- Potential for increased emergency response times due to delays at level crossings and increased demand due to safety risks associated with new level crossings.

**Table 8.1 Social impact summary table – operation**

Potential impact description	Stakeholders affected	Nature, type and duration	Likelihood	Consequence	Risk rating
<b>Industry and business</b>					
The estimated potential economic impact of the permanent removal of agricultural land is estimated to be a loss of about \$1.54 million which is equivalent to about 0.16% of the annual value of agricultural production in the regional study area. This would be offset by \$258.9 million in incremental benefits due to improvements in freight productivity, reliability and availability, and benefits to the community from crash reductions, reduced environmental externalities and road decongestion benefits. Agricultural industries in the regional study area would benefit from improvements in supply chain efficiency. In particular, the proposal would increase competition between road and rail freight modes, driving savings in freight costs, which would benefit producers, consumers and the regional community.	Regional agricultural industry and communities	Positive Direct Long term	Almost certain	Major	Extreme
During operation, there may be some opportunities for local businesses to supply ARTC to assist with rail operations and maintenance.	Businesses in the local and regional study area	Positive Indirect Short term	Possible	Minimal	Low
<b>Employment, workforce and training</b>					
Up to 10 skilled roles required for day-to-day operation. Given existing initiatives to train local workforce and attract skilled workers to the region, these roles are expected to be filled by the local workforce. There is also potential for these roles to attract skilled workers to the region, which would support objectives of regional development bodies and councils.	Skilled and unskilled workforce in the local and regional study area	Positive Direct Long term	Likely	Minimal	Moderate
<b>Property and landholder impacts</b>					
About 142 privately-owned properties would be impacted by land requirements for the proposal. This may disrupt internal property access, farming operations and operating costs, or change current farming practices for these properties.	Property owners, farm operators and staff in the local study area	Negative Direct Long term	Likely	Moderate	High

Potential impact description	Stakeholders affected	Nature, type and duration	Likelihood	Consequence	Risk rating
<p>Changes to the private road network where the rail corridor crosses existing access on private properties. This would impact access and connectivity for some landholders within their properties, impacting on the distances and time required for travel.</p> <p>The proposal would be designed in accordance with relevant safety standards and requirements, including fencing of the corridor, as required, to manage potential safety risks relating to livestock and access to the corridor.</p>	Property owners, farm operators and staff in the local study area	Negative Direct Long term	Possible	Moderate	High
<b>Local amenity, community values and wellbeing</b>					
<p>Up to 40 receivers along the proposal area would have the potential to experience increases in daytime and night-time noise in 2025, and an additional 26 receivers would have the potential to experience increased noise in 2040 when the number of trains increase. Predicted noise levels were above the maximum noise criteria within the night-time period at 39 receivers.</p> <p>Increased noise has the potential to disrupt daily activities and night time noise has the potential to disturb night-time peacefulness.</p>	Residents in the local study area close to proposal area	Negative Direct Long term	Possible	Minor	Moderate
<p>Visual changes as a result of new rail infrastructure, bridges and train movements may reduce local amenity, interrupt views and affect values associated with waterways and the landscape character. Local Aboriginal communities, residents, users of waterways may be more sensitive to these changes. However it is expected that community members would adapt to these visual changes over time and would not be deterred from using the river and reserve.</p>	Residents in the local study area close to proposal area; Aboriginal communities and users of waterways in the local and regional study area	Negative Direct Long term	Possible	Minor	Moderate



Potential impact description	Stakeholders affected	Nature, type and duration	Likelihood	Consequence	Risk rating
<b>Access and connectivity</b>					
Public and private road closures or diversions may change the route some people need to use to access properties, local towns, schools and other destinations. This would lead to minimal impacts for some road users, with some increased travel distances and journey times for some people. New level crossings may also lead to minor delays, increasing travel time for some road users. It is expected community members would adapt to these changes over time.	Residents and users of the local road network, school bus operators and students in the local study area	Negative Direct Long term	Unlikely	Minimal	Low
Risks to health and safety for pedestrians, motorists and livestock from potential collisions with trains at level crossings.	Communities in the local study area	Negative Direct Long term	Unlikely	Catastrophic	High
<b>Impacts on social infrastructure</b>					
Users of recreational facilities near the rail corridor (Narrabri Dirt Bike Club and Three Mile Reserve) may experience amenity changes due to the potential for increased noise and vibration and visual changes as a result of the proposal. This is not expected to deter most users due to the nature of these facilities.	Users of Narrabri Dirt Bike Club and Three Mile Reserve	Negative Direct Long term	Possible	Minimal	Low
Emergency services could experience increased response times due to delays at level crossings, particularly the level crossing at Castlereagh Highway. Demand for emergency services could also increase due to increased safety risks associated with illegal crossings while trains are approaching, although the likelihood of an accident occurring is low.	Regional and local emergency service providers	Negative Indirect Long term	Unlikely	Moderate	Moderate

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# 9 Cumulative impact assessment

## 9.1 Overview

For an EIS, cumulative impacts can be defined as the successive, incremental, and combined effect of multiple impacts, which may in themselves be minor, but could become significant when considered together. The methodology and projects considered for the cumulative impact assessment are provided in detail in the EIS (described in Part D chapter D1 of the EIS). Seven major projects were identified as having a cumulative impact and sufficient information to undertake a cumulative impact assessment. These include:

- Inland Rail – Narrabri to North Star
- Inland Rail – Parkes to Narromine
- Narrabri Gas Project
- Silverleaf Solar Farm, Narrabri
- Gilgandra Solar Farm
- Narromine Solar Farm
- Western Slopes Pipeline.

The locations of these projects are shown in Figure 9.1.

## 9.2 Construction and operation

The sections below provide an overview of potential cumulative social impacts and benefits that could occur as a result of construction and operation of the proposal with the projects listed above.

### 9.2.1 Industry and business

Multiple projects undergoing construction concurrently and/or sequentially may lead to the following benefits:

- increased opportunity for local businesses in the region to supply of goods and services to multiple projects
- increased demand for tourist accommodation benefiting providers, particularly in Narrabri in Narromine where multiple projects are co-located.

As discussed in section 7.1.2, ARTC is committed to maximising opportunities for procurement from local businesses and Indigenous businesses. With three proposed ARTC projects (Inland Rail – Parkes to Narromine, Inland Rail Narrabri to North Star and the proposal) potentially undergoing construction concurrently or within a short timeframe, there may be further benefits for local and Indigenous businesses in the region, particularly around Narromine and Narrabri where the proposals overlap.

Increased demand for tourist accommodation may benefit individual accommodation providers, and as discussed in section 7.4, the proposal is not expected to contribute to restricted demand for tourists in the region.

Section 8.1 discusses the operational benefits of the proposal, which would be delivered with operation of Inland Rail as a whole. Operation of the Narrabri Gas Project with the proposal has the potential to deliver benefits to businesses located at the freight and logistics hub proposed for Narrabri by Narrabri Shire Council through provision of affordable energy to businesses in the industrial park (see section 6.2.5), combined with reduced freight costs.

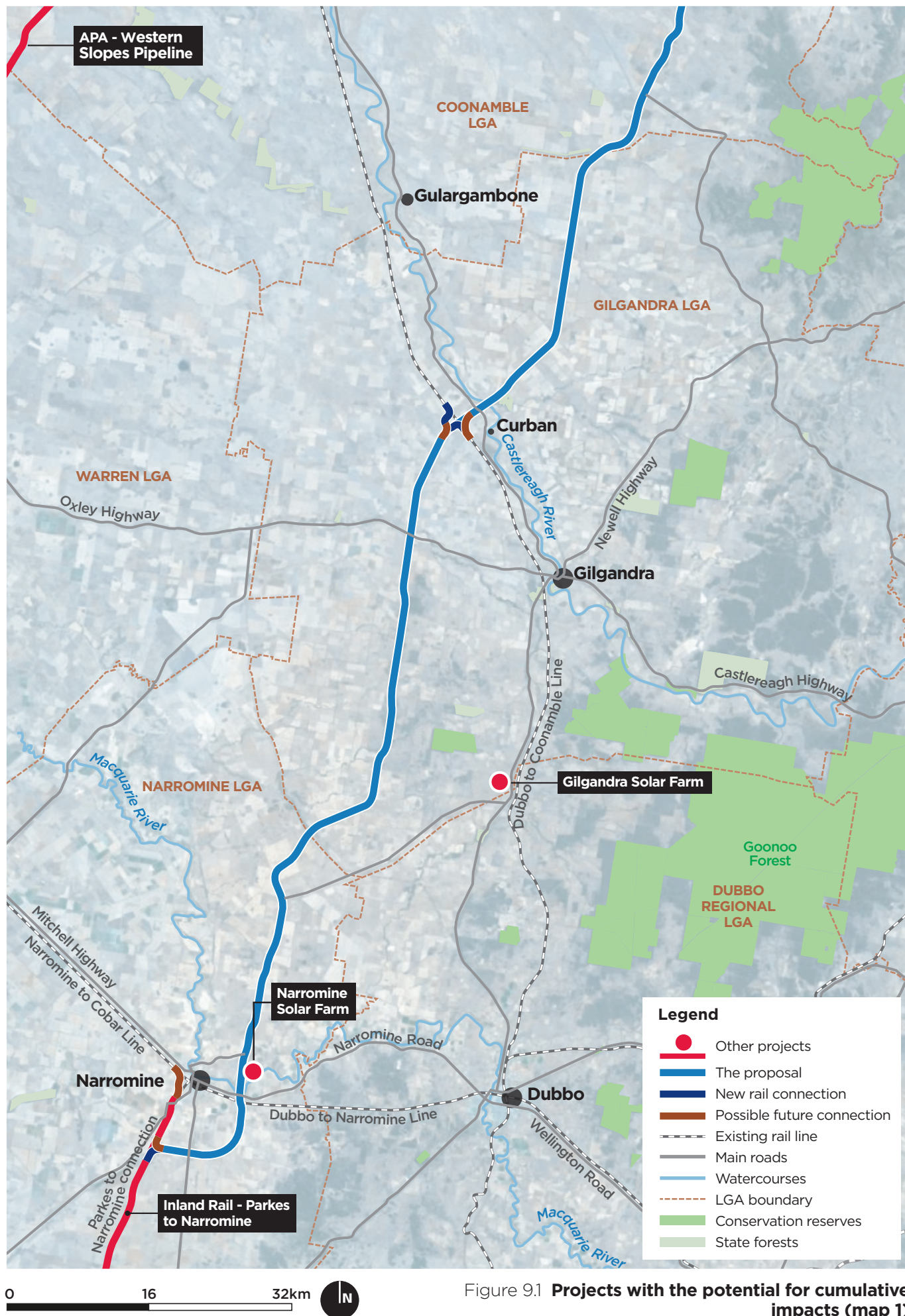


Figure 9.1 **Projects with the potential for cumulative impacts (map 1)**



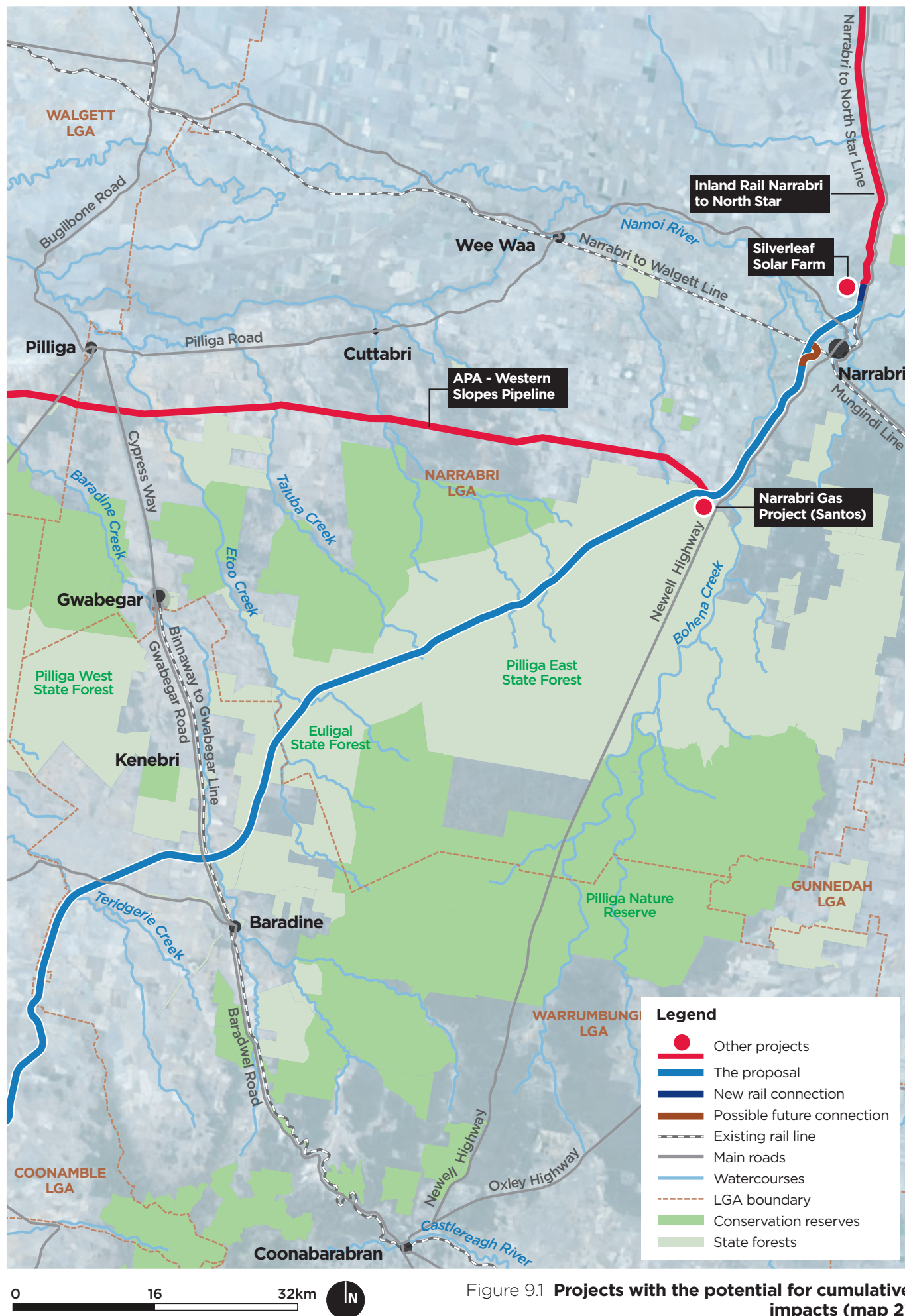


Figure 9.1 **Projects with the potential for cumulative impacts (map 2)**

### **9.2.2 Employment, workforce and training**

All projects would provide opportunities for employment for skilled workforce in the region, particularly labourers, tradespeople, machinery operators, engineers, surveyors and site supervisors. Larger projects, such as the Inland Rail proposals, would likely increase opportunities to upskill the regional workforce, and provide increased opportunities to retain young people in particular. There may also be opportunities to transfer experience and skills between projects. It is also expected these projects would lead to further indirect jobs available in the region.

The *ARTC Inland Rail Narromine to Narrabri Economic Assessment* (KPMG, 2020) reports that the concurrent construction of interacting projects has the potential to increase demand for labour in the local and regional economy, particularly for workers with trade and construction skills / knowledge. The labour market impact of this cumulative demand will be dependent on the workforce profile and construction schedule of the interacting projects and state of the labour market at any point in time. As discussed in section 7.2, there is potential for the regional labour market to experience some tightness; however, the economic shock of the COVID-19 pandemic is likely to lead to a slack labour market in the region. The *ARTC Inland Rail Narromine to Narrabri Economic Assessment* (KPMG, 2020) reports that scheduling of projects could be optimised to minimise impacts on the regional labour market.

During operation there would likely be further employment opportunities as a result of operation of the Inland Rail projects in the region and other projects, such as the Narrabri Gas Project, which would be available for the skilled local workforce.

### **9.2.3 Property and landholders**

There may be several areas where the projects would overlap with the proposal. Depending on the type of land requirements for each project, the potential impacts described in section 7.3 have the potential to be greater for affected landholders as a result of engaging with several projects either at the same time or within a short timeframe. This includes further disruption to activities on their properties, as well as wellbeing effects for landowners.

Where the proposal overlaps with other projects, there may be a change from agricultural to other uses, which together could change the character of these area and reduce feelings of attachment and pride for some residents.

### **9.2.4 Housing and accommodation**

Although the proposal includes temporary workforce accommodation and demand for tourist accommodation is likely to be minor, there could be minor cumulative demand for tourist accommodation and rental accommodation during construction of the proposal, particularly in Narrabri and Narromine where projects overlap. However, this would depend on timing of construction for the projects.

### **9.2.5 Local amenity, community values and wellbeing**

Construction activities for all projects would have the potential for local amenity changes such as increased noise and visual impacts.

There is potential for community members located in areas where the projects overlap to experience construction noise impacts for a longer duration if project construction activities occur in close succession. This could occur for properties near where the proposal connects to Inland Rail – Narrabri to North Star.



Community members could also experience cumulative noise impacts if construction activities occur at the same time. This is most likely to occur in locations close to Narrabri, including where the proposal site crosses the APA Western Slopes Pipeline, where the proposal site is close to the eastern boundary of Silverleaf Solar Farm, and where the proposal is close to the northern boundary of the Narrabri Gas Project (Santos). This could also occur outside of Narromine where the proposal is located close to the western border of the Narromine Solar Farm. Given the construction strategy for the proposal would be progressive along the alignment, concurrent construction impacts would last for a short period, except where construction infrastructure such as temporary workforce accommodation facilities are located.

These areas may also experience visual impacts resulting from construction infrastructure and activities. The *ARTC Inland Rail Narromine to Narrabri Landscape and Visual Assessment* (JacobsGHD, 2020c) reports that the major sources of cumulative visual impacts would occur where the proposal connects with other Inland Rail sections and the Narrabri Gas Project (Santos).

Community members in the study area, particularly in Narrabri and Narromine where more projects are located close to each other, may experience construction fatigue if the proposal undergoes construction concurrently or within a short period of time as other projects.

Construction fatigue can lead to feelings of annoyance, inconvenience, and people feeling they are at a greater disadvantage than before the projects occurred. Residents may experience a diminished sense of pride and enjoyment of their area. These impacts may affect people's way of life, including their capacity to participate in community activities, affect personal and social relationships and reduce social interactions.

#### **9.2.6 Access and connectivity**

The *ARTC Inland Rail Narromine to Narrabri Traffic and Transport Assessment* (JacobsGHD, 2020b) reports there is potential for cumulative impacts to occur due to construction traffic from the proposal and Inland Rail – Narrabri to North Star in Narrabri; however, these impacts are expected to be minor. There is potential for this project, as well as the Gilgandra Solar Farm, Narromine Solar Farm and Narrabri Gas projects, to share haulage routes with the proposal. However these are likely to be arterial roads and would be expected to accommodate the increased demand.

There is potential for some community members to experience delays at times in the areas where projects overlap, which could increase travel times and be an inconvenience. With increased non-resident workforces in the region, there may be increased traffic throughout the region. An increase in vehicles on the road network has the potential to lead to perceived decrease in road safety for some community members.

However, operation of the proposal with the other Inland Rail projects would reduce the overall number of trucks from the road network, contributing to increase safety for the local and wider road network.

#### **9.2.7 Impacts on social infrastructure**

There is potential for further increased demand on regional community services as a result of additional non-resident workforce in the study area during construction of the projects, which may particularly affect health and emergency services. Provision of health services varies across the study area (section 6.4.4), and depending on the location of the proposal workforce, there is potential for increased demand to reduce availability for local residents. Potential impacts on emergency services during construction are expected to be managed through project-specific measures (including appropriate management measures defined by each project's CEMPs) which would be identified in consultation with local emergency services.

There is potential for the increased construction traffic discussed in section 9.2.6 to increase the time required to travel to community facilities and services, which could be an inconvenience and cause people to be late to appointments. These impacts are expected to be localised and would depend on timing of projects.

During operation of the Inland Rail projects, emergency services could experience further increased demand due to safety risks associated with new level crossings, and changes to emergency routes. ARTC would continue to consult with local and emergency services during detailed design, construction and operation.

## 10 Recommended mitigation measures

The social impacts and opportunities identified and assessed in this report would be managed and mitigated through a range of measures recommended in both this report, and by those recommended in other EIS technical reports. The development of social impact management measures has therefore considered the recommendations of other studies.

Overall, the key mitigation measures recommended to address social impacts and opportunities relate to the following key themes, which underpin ARTC's approach to social performance and social impact management:

- local business and industry content
- workforce management
- housing and accommodation
- community health and wellbeing.
- community and stakeholder engagement.

ARTC would prepare a Social Impact Management Plan (SIMP) which would provide a detailed plan for how the impacts and opportunities identified in this report would be managed and mitigated from approval of the proposal through detailed design and construction. This would include roles and responsibilities for the stakeholders involved in managing social impacts and enhancing opportunities. The SIMP will specify detailed management measures supported by appropriate monitoring and reporting requirements.

ARTC has been implementing a range of management measures to manage social impacts and enhance opportunities of the overall Inland Rail program, such as through its comprehensive stakeholder and community engagement strategy for the program, and property negotiation process and support for landholders affected by property impacts.

The key recommended proposal-specific mitigation measures that would be implemented by the primary contractor are development and implementation of:

- Industry participation plan
- Workforce management plan
- Communication management plan
- Temporary workforce accommodation plan.

Table 10.1 presents the mitigation measures recommended to address the social issues and impacts identified in this report.

**Table 10.1 Summary of mitigation measures**

Issue/impact	Mitigation measures	Relevant project phase
Community wellbeing, amenity and access impacts	<p>ARTC would continue to manage and deliver program-wide community and stakeholder engagement for Inland Rail in accordance with the <i>Inland Rail Communications and Engagement Strategy</i>.</p>	Pre-construction Construction
	<p>A communication management plan would be developed in accordance with the <i>Inland Rail Communications and Engagement Strategy</i>, to ensure that:</p> <ul style="list-style-type: none"> <li>landowners/landholders and community members affected by construction activities (eg property impacts, access changes, noise, vibration, dust) are notified in a timely manner about impacts</li> <li>accurate and accessible information is made available</li> <li>feedback from the community is encouraged</li> <li>opportunities for input are provided where appropriate.</li> </ul>	
	<p>Local residents, landholders, landowners, businesses, affected social and recreation facilities and other stakeholders would be notified before work starts in accordance with the communication management plan, and would be regularly informed of construction activities.</p>	
	<p>The communication management plan would include a complaints management system for construction-related activities including:</p> <ul style="list-style-type: none"> <li>a 24-hour, seven days a week response line for complaints and enquiries</li> <li>a postal and email address to which complaints and enquiries may be sent</li> <li>publication of contact details on the proposal website and in notifications</li> <li>management of complaints in accordance with ARTC's complaints management system and the conditions of approval for the proposal including steps to respond to complaints, verbal and written responses and a database to record all enquiries and responses.</li> </ul> <p>The complaints management system would be maintained throughout the construction period and for a minimum of 12 months after construction finishes.</p>	
	<p>Key stakeholders (including local councils, emergency service providers, public transport providers, the general community, and surrounding landowners/occupants) would continue to be consulted in accordance with the communication management plan for the proposal.</p>	Construction

Issue/impact	Mitigation measures	Relevant project phase
Impacts to landholders and communities due to property impacts	<p>ARTC would continue to consult with landowners and landholders affected by property acquisition.</p> <p>During the property acquisition process, ARTC would seek to secure agreement with affected landholders, to guide property-level design requirements and the management of construction on or immediately adjacent to private properties.</p> <p>The agreements may include:</p> <ul style="list-style-type: none"> <li>• measures to minimise property impacts, including on agricultural operations</li> <li>• specific requirements to ensure that operations, including the movement of livestock and farm machinery are able to be maintained as efficiently as possible</li> <li>• measures to manage severance impacts where practicable, including appropriate access solutions</li> <li>• required adjustments to affected structures.</li> </ul>	Pre-construction
	<p>Where land is acquired, compensation would be assessed in accordance with the <i>Land Acquisition (Just Terms Compensation) Act 1991</i> and <i>Determination of compensation following the acquisition of a business</i> (NSW Government, undated). Depending on the individual circumstances of each land/business owner and the proposed impacts upon the land and to operations, compensation may take the form of money or land/works – as agreed by the parties.</p>	Pre-construction
Impacts on Narrabri Dirt Bike Club	<p>ARTC would continue to consult with Narrabri Dirt Bike Club, Narrabri Shire Council and Department of Planning, Industry and Environment (Crown Lands) in relation to the temporary and permanent land requirements at the club site, the potential impacts on the club's facilities, and measures to address the identified impacts.</p>	Pre-construction
Impacts on Baradine Showground	<p>ARTC would continue to consult with The Baradine Showground Trust and Camp Cypress to manage access and temporary land requirements at the showground.</p>	Pre-construction
Construction impacts (temporary accommodation facilities)	<p>A temporary workforce accommodation plan would be prepared to guide the design and provision of temporary accommodation. The plan would be developed in accordance with ARTC's <i>Inland Rail Programme Accommodation Principles (2018b)</i>, relevant council development codes and guidelines, and the following overarching principles:</p> <ul style="list-style-type: none"> <li>• temporary workforce accommodation is designed to be integrated into the existing communities</li> <li>• temporary workforce accommodation adequately provides for occupants and has a high level of on-site amenity.</li> </ul>	Pre-construction

Issue/impact	Mitigation measures	Relevant project phase
	<p>The plan would define:</p> <ul style="list-style-type: none"> <li>the arrangement and layout of facilities in order to minimise amenity impacts to surrounding sensitive receivers (including visual amenity, lighting and privacy)</li> <li>ensuring proposed built form heights are appropriate within their surrounding context</li> <li>opportunities for retention of screening vegetation (where present) and provision of additional landscaping as required</li> <li>how services would be provided and managed (eg security, waste, stormwater, wastewater) to ensure consistency with relevant codes and guidelines, such that impacts to local infrastructure networks and the environment are avoided as far as possible</li> <li>provision of adequate parking on site</li> <li>how the site would be decommissioned and rehabilitated consistent with the rehabilitation strategy for the proposal.</li> </ul> <p>The plan would be developed in consultation with relevant key stakeholders including the relevant local council.</p>	
<p>Economic benefits and impacts on regional industries and businesses</p> <p>Employment and training opportunities for local and regional workforces</p>	<p>ARTC would continue to support local employment in accordance with the <i>Australian Jobs Act 2013</i> and Australian Industry Participation National Framework, and through the Inland Rail Academy to leverage training programs, upskill local residents and young people, and connect businesses with Inland Rail opportunities and key regional industries.</p>	<p>Pre-construction</p>
<p>Opportunities for local and indigenous businesses</p>	<p>A proposal-specific industry participation plan would be developed and implemented to manage the potential employment and regional economic benefits of the proposal. The plan would address the requirements of the <i>Australian Jobs Act 2013</i>, the Australian Industry Participation National Framework, and the <i>Inland Rail Indigenous Participation Plan</i> (ARTC, 2019). It would identify an achievable list of goods and services that could be subcontracted, as well as targets for local and Indigenous business participation.</p>	<p>Construction</p>
	<p>A project-specific workforce management plan would be developed and implemented to manage:</p> <ul style="list-style-type: none"> <li>local and Indigenous employment opportunities</li> <li>potential impacts of the non-resident construction workforce on host communities including community services</li> <li>workforce wellbeing and integration with host communities.</li> </ul>	<p>Construction</p>



Issue/impact	Mitigation measures	Relevant project phase
	<p>The plan would include, but not be limited to:</p> <ul style="list-style-type: none"> <li>recruitment, education and training measures to identify the skills and qualifications required</li> <li>how the contractor would work with regional stakeholders to upskill local residents</li> </ul>	
Impacts of non-resident workforce on local communities	<p>The workforce management plan would include measures to manage potential impacts of the non-resident construction workforce on local and regional communities.</p> <p>The plan would include, but not be limited to:</p> <ul style="list-style-type: none"> <li>a code of conduct for workers, including a zero tolerance policy relating to anti-social behaviour</li> <li>strategies to promote wellbeing of the workforce</li> <li>a monitoring mechanism for use of local tourist accommodation and rental housing by workers</li> <li>consultation with local health and emergency services to establish processes for managing potential increased demand due to non-resident workforce.</li> </ul>	Pre-construction Construction
Impacts on emergency services	<p>The communication management plan would include measures to ensure ongoing consultation with local emergency services providers during detailed design and construction to inform providers about the locations of level crossings and changes to access routes and road conditions.</p>	Pre-construction Construction Operation
Temporary land requirements at the Narrabri Dirt Bike Club	<p>The area of land within the Narrabri Dirt Bike Club site that is required during construction only would be restored and returned to (as a minimum) the pre-existing condition.</p>	Construction
Increased safety risks due to new level crossings	<p>A rail safety awareness program would be developed and implemented prior to the operation of Inland Rail to educate the community regarding safety around trains. This would include landowners with properties intersected by the proposal.</p>	Operation

## 10.1 Assessment of residual risks

Table 10.2 and Table 10.3 summarise the potential social impacts and opportunities identified in sections 7, 8 and 9 for the pre-construction, construction and operation phases of the proposal. They identify the recommended mitigation or management measures for each impact, as well as relevant EIS technical studies which detail the mitigation and management measures that would also help to address the social impacts and benefits. The likelihood and consequence of the impact has been re-assessed assuming implementation of the recommended mitigation measures to provide a residual risk rating for each social impact or benefit.

As discussed in section 3.2.5, it should be noted that the degree to which community members would experience social impacts would vary based on various factors such as perceptions and individual values, sensitivity to change, distance from the proposal, and duration people experience the impacts over. The residual risk rating has been applied for the majority of stakeholders affected by the impact, however the risk rating would likely be higher or lower for some stakeholders.

**Table 10.2 Assessment of residual social risks – construction**

Potential impact description	Stakeholders affected	Risk/benefit rating	Management and mitigation measures	Relevant EIS technical study	Likelihood	Consequence	Residual risk rating
<b>Industry and business</b>							
The Construction sector, Professional, Scientific and Technical Services sector, and the Wholesale Trade sector would expand during construction due to direct and indirect employment opportunities of employment. This is expected to benefit the regional economy and provide additional employment opportunities for regional and local communities.	Regional Construction sector, Professional, Scientific and Technical sector, Wholesale trade sector	Extreme Positive	No management or mitigation required.	<i>ARTC Inland Rail Narromine to Narrabri Economic Assessment</i> (KPMG, 2020)	Almost certain	Moderate	Extreme
Increased demand for goods and services would benefit local and Indigenous businesses through subcontracting to the primary construction contractor, including supplying temporary workforce accommodation facilities. However there are existing barriers and challenges to participation for local and Indigenous businesses in the region.	Local and Indigenous businesses in the local and regional study area	Moderate Positive	<p>ARTC would continue to support local employment through in accordance with the <i>Australian Jobs Act 2013</i> and Australian Industry Participation National Framework and the Inland Rail Academy to leverage training programs, upskill local residents and young people and connect businesses with Inland Rail opportunities and key regional industries.</p> <p>The contractor would prepare and implement a project-specific Industry Participation Plan which would include a range of actions to communicate local supply opportunities and preference local and Indigenous businesses.</p>	<i>ARTC Inland Rail Narromine to Narrabri Economic Assessment</i> (KPMG, 2020)	Likely	Moderate	High

Potential impact description	Stakeholders affected	Risk/benefit rating	Management and mitigation measures	Relevant EIS technical study	Likelihood	Consequence	Residual risk rating
Economic benefits due to the non-resident workforce spending money in regional towns hosting temporary workforce accommodation facilities when not on shift. Businesses likely to benefit include food and beverage, hospitality and retail. However there is potential for workers to travel to larger centres such as Dubbo, especially those in the southern end of the study area.	Businesses located in towns in the local and regional study area close to temporary workforce accommodation facilities (eg Narromine, Gilgandra, Baradine, Narrabri and Dubbo)	Moderate Positive	The contractor would prepare a project-specific an industry participation plan to manage local and Indigenous procurement opportunities.	N/A	Possible	Minor	Moderate

Potential impact description	Stakeholders affected	Risk/benefit rating	Management and mitigation measures	Relevant EIS technical study	Likelihood	Consequence	Residual risk rating
<b>Employment, workforce and training</b>							
<p>Construction employment opportunities for skilled workforce in the regional study area, particularly labourers, tradespeople, machinery operators, engineers, surveyors and site supervisors. ARTC is committed to creating opportunities for development of local workers, however there are a number of challenges that would need to be considered to fulfil these commitments including:</p> <ul style="list-style-type: none"> <li>• Skills shortage in the study area which could limit the ability of the proposal to deliver local employment opportunities. However there are many local farmers seeking alternate income who would have relevant skills for construction work</li> <li>• The youth labour force fluctuates and many younger people leave the region.</li> <li>• Females in the study area have lower rates of unemployment than males.</li> </ul> <p>There are high levels of unemployment and barriers to employment for Indigenous people.</p>	Local skilled and unskilled workforce in the local and regional study area	High Positive	<p>ARTC would continue to support local employment through in accordance with the <i>Australian Jobs Act 2013</i> and Australian Industry Participation National Framework and the Inland Rail Academy to leverage training programs, upskill local residents and young people and connect businesses with Inland Rail opportunities and key regional industries.</p> <p>The workforce management plan prepared by the contractor would include a recruitment, education and training sub-plan to address skill shortages and maximise employment of local workforce on the proposal.</p>	<i>ARTC Inland Rail Narramine to Narrabri Economic Assessment</i> (KPMG, 2020)	Likely	Moderate	High

Potential impact description	Stakeholders affected	Risk/benefit rating	Management and mitigation measures	Relevant EIS technical study	Likelihood	Consequence	Residual risk rating
Potential for upskilling of the local workforce through the provision of training during construction which would provide longer-term benefits for these workers.	Workforce in the local and regional study area	Moderate Positive	ARTC would continue to implement the Inland Rail Academy to contribute to upskilling local residents for employment opportunities associated with the proposal.  The workforce management plan prepared by the contractor would include recruitment, education and training sub-plan to address skill shortages and maximise employment of local workforce on the proposal.	N/A	Likely	Moderate	High
Indirect employment opportunities as a result of construction in Professional, Science and Technical Services and Wholesale Trades.	Workforce in the local and regional study area	High Positive	No management or mitigation required.	<i>ARTC Inland Rail Narromine to Narrabri Economic Assessment</i> (KPMG, 2020)	Likely	Moderate	High

Potential impact description	Stakeholders affected	Risk/benefit rating	Management and mitigation measures	Relevant EIS technical study	Likelihood	Consequence	Residual risk rating
<b>Property and landholder impacts</b>							
Potential for disruption to internal property access due to severed/fragmented land as a result of permanent partial property acquisitions, and/or temporary lease of land for construction infrastructure. This may reduce efficiency and viability of farming operations on affected properties, increase operating costs associated with the movement of livestock and/or farm machinery within the property, and require changes to current farming practices.	Landholders in the local study area affected by property acquisition	High Negative	<p>ARTC would continue to consult with landowners and landholders affected by property acquisition. During the property acquisition process, ARTC would seek to secure agreement with affected landholders, to guide property-level design requirements and the management of construction on or immediately adjacent to private properties.</p> <p>The contractor would prepare a communication management plan as part of the CEMP to ensure landholders affected by construction impacts are notified in a timely manner and kept informed.</p>	<i>ARTC Inland Rail Narromine to Narrabri Agriculture and Land Use Assessment</i> (JacobsGHD, 2020a)	Possible	Minor	Moderate
Uncertainty and frustration leading to stress for some landowners facing changes due to property impacts, with potential implications for individual health and wellbeing. This has likely been compounded by the prolonged drought conditions in the region and the economic shock of the COVID-19 pandemic, which has placed increased pressure on landholders and those dependent on their properties for household income.	Landholders in the local study area affected by property acquisition	Extreme Negative	ARTC would continue to manage and deliver program-wide community and stakeholder engagement for Inland Rail in accordance with the <i>Inland Rail Communications and Engagement Strategy</i> , and continue to consult landowners and landholders affected by property acquisition.	N/A	Possible	Moderate	High



Potential impact description	Stakeholders affected	Risk/benefit rating	Management and mitigation measures	Relevant EIS technical study	Likelihood	Consequence	Residual risk rating
Potential for disruptions to day-to-day family life for occupants of properties near construction activities eg changes to school bus services, mail deliveries, utility changes.	Landholders in the local study area	High Negative	The contractor would prepare a communication management plan as part of the CEMP to ensure landholders affected by construction impacts are notified in a timely manner and kept informed.	ARTC Inland Rail Narromine to Narrabri Agriculture and Land Use Assessment (JacobsGHD, 2020a)	Likely	Minor	Moderate
<b>Housing and accommodation</b>							
Given that the workforce accommodation is expected to be sufficient for the peak workforce if required, it is expected that the majority of non-resident workforce would stay in the temporary workforce accommodation facilities. However, the proposal may increase some demand for local tourist accommodation facilities during the design and construction phase as ARTC and specialist workers access the proposal site for short-term periods. The potential minor increase in demand for tourist accommodation would generate a positive impact for local accommodation service providers, and is unlikely to restrict the usual demand for accommodation in the region.	Accommodation providers in the local study area	Low Negative	The project-specific workforce management plan would be developed to manage potential impacts of the non-resident construction workforce on host communities.	N/A	Unlikely	Minimal	Low

Potential impact description	Stakeholders affected	Risk/benefit rating	Management and mitigation measures	Relevant EIS technical study	Likelihood	Consequence	Residual risk rating
There is potential for some non-resident workers to choose to rent homes in the study area rather than stay in the temporary workforce accommodation, and this is most likely to occur in host towns. This demand is likely to be small and subject to availability of rental accommodation at a reasonable price. There are varying levels of availability of rental properties and varying housing vacancy rates across the host towns, and housing is generally affordable across the local and regional study area. It is unlikely that such minor demand for rental accommodation would increase the price of rental properties in these locations.	Communities in the local study area	Low Negative	The project-specific workforce management plan would include measures to manage potential impacts of the non-resident construction workforce on host communities.	N/A	Unlikely	Minimal	Low
<b>Local amenity, community values and wellbeing</b>							
Potential for reduced amenity due to increased noise and vibration for residents in close proximity to construction activities. This may interrupt people's day-to-day activities, and some residents may experience night-time noise at times, which has the potential to cause sleep disturbance. Night-time noise would occur intermittently.	Landholders and residents in the local study area close to works along the proposal area	Moderate Negative	Relevant plans in the CEMP would include measures to minimise the impacts of construction on local amenity (including but not limited to noise, vibration, dust and visual impacts).  The communication management plan would include measures to ensure that community members affected by construction activities are notified in a timely manner.	<i>ARTC Inland Rail Narromine to Narrabri Noise and Vibration Assessment – Construction and Other Operations (JacobsGHD, 2020f)</i>	Unlikely	Minor	Low

Potential impact description	Stakeholders affected	Risk/benefit rating	Management and mitigation measures	Relevant EIS technical study	Likelihood	Consequence	Residual risk rating
Potential for residents in Gilgandra close to the temporary workforce accommodation facility to experience increased noise due to establishment and use of the facility.	Residents in the local study area living close to temporary workforce accommodation facilities in Gilgandra and Baradine	Moderate Negative	<p>Relevant plans in the CEMP would include measures to minimise the impacts of construction on local amenity (including but not limited to noise, vibration, dust and visual impacts).</p> <p>The communication management plan would include measures to ensure that community members affected by construction activities are notified in a timely manner.</p>	<p><i>ARTC Inland Rail Narromine to Narrabri Noise and Vibration Assessment – Construction and Other Operations (JacobsGHD, 2020f)</i></p> <p><i>ARTC Inland Rail Narromine to Narrabri Landscape and Visual Assessment (JacobsGHD, 2020c)</i></p>	Unlikely	Minimal	Low

Potential impact description	Stakeholders affected	Risk/benefit rating	Management and mitigation measures	Relevant EIS technical study	Likelihood	Consequence	Residual risk rating
Some residents living in close proximity to construction activities may spend more time cleaning and washing surfaces. Vulnerable groups (eg people with asthma, elderly) may be more sensitive to dust.	Residents in the local study area living in close proximity to construction works	Moderate Negative	Relevant plans in the CEMP would include measures to minimise the impacts of construction on local amenity (including but not limited to noise, vibration, dust and visual impacts). This includes managing air quality impacts in line with an air quality management plan prepared by the contractor.  The communication management plan would include measures to ensure that community members affected by construction activities are notified in a timely manner.	Air quality assessment presented in chapter B10 and Appendix I of EIS	Unlikely	Minimal	Low
Changes to visual amenity from construction activities and infrastructure may impact on community values relating to the rural landscape and reduce the enjoyment of private properties for some residents. Some residents may be impacted by a loss of privacy due to the proximity of workers to their properties, particularly where temporary workforce accommodation would be located near residential areas in Gilgandra.	Landholders and residents in the local study area close to works, residents close to temporary accommodation facilities	Moderate Negative	Relevant plans in the CEMP would include measures to minimise the impacts of construction on local amenity (including but not limited to noise, vibration, dust and visual impacts).  The communication management plan would include measures to ensure that community members affected by construction activities are notified in a timely manner.	<i>ARTC Inland Rail Narromine to Narrabri Landscape and Visual Assessment (JacobsGHD, 2020c)</i>	Unlikely	Minimal	Low

Potential impact description	Stakeholders affected	Risk/benefit rating	Management and mitigation measures	Relevant EIS technical study	Likelihood	Consequence	Residual risk rating
Strongly held unsupportive views about the proposal by affected landholders and the general community are likely to cause increased stress and anxiety in the community, and given the long planning, design and approval timeframes of the proposal such impacts can be experienced by some community members over an extended period of time, affecting mental health and wellbeing for some. These potential impacts, when compounded with the impacts of other factors affecting the regional community such as the recent drought, bushfires and COVID-19 pandemic, have the potential to exacerbate feelings of stress and anxiety related to the proposal.	Landholders and communities in the local study area	High	ARTC would continue to manage and deliver program-wide community and stakeholder engagement for Inland Rail in accordance with the <i>Inland Rail Communications and Engagement Strategy</i> .	N/A	Possible	Minor	Moderate
Potential for the associated perception of anti-social behaviour and safety concerns for locals due to a temporary increase in the male population of the towns of Narromine, Gilgandra, Baradine and Narrabri. Some residents, and residents of Jack Towney Hostel, may be more sensitive to perceived impacts.	Residents in the local study area living in Narromine, Gilgandra, Baradine and Narrabri Jack Towney Hostel residents	Low Negative	The project-specific workforce management plan would include measures to manage potential impacts of the non-resident construction workforce on local and regional communities.	N/A	Unlikely	Minimal	Low

Potential impact description	Stakeholders affected	Risk/benefit rating	Management and mitigation measures	Relevant EIS technical study	Likelihood	Consequence	Residual risk rating
Literature indicates that non-resident workforces are at greater risk of mental ill health than local workers undertaking similar work, and this is primarily related to isolation and loneliness.	Non-resident construction workforce	High	The project-specific workforce management plan would include measures to manage workforce wellbeing.	N/A	Unlikely	Minor	Low
Potential for community values associated with Aboriginal and non-Aboriginal cultural heritage to be affected by construction activities due to impacts to places of cultural significance and/or heritage items.	Local study area communities	Moderate	A range of management measures recommended in the Aboriginal cultural heritage assessment and non-Aboriginal heritage assessment which involve consultation with stakeholders and community members are expected to manage impacts on community values.	<i>ARTC Inland Rail Narromine to Narrabri Aboriginal Cultural Heritage Assessment</i> (JacobsGHD, 2020g) <i>ARTC Inland Rail Narromine to Narrabri Non-Aboriginal Heritage Assessment and Statement of Heritage Impact</i> (JacobsGHD, 2020h)	Possible	Minor	Moderate



Potential impact description	Stakeholders affected	Risk/benefit rating	Management and mitigation measures	Relevant EIS technical study	Likelihood	Consequence	Residual risk rating
<b>Access and connectivity</b>							
Construction traffic and temporary changes to road conditions may result in minor delays and disruptions, increasing travel times for some road users.	Road users in the local study area	Low Negative	A traffic, transport and access management plan would be implemented to manage traffic impacts.	<i>ARTC Inland Rail Narromine to Narrabri Traffic and Transport Assessment</i> (JacobsGHD, 2020b)	Unlikely	Minimal	Low
Potential for increase in actual and perceived road safety risks due to construction traffic. Shuttle buses would be used to transport temporary construction workforce to reduce the number of vehicles using local roads.	Communities in the local study area	Low Negative	No additional mitigation and management required.	<i>ARTC Inland Rail Narromine to Narrabri Traffic and Transport Assessment</i> (JacobsGHD, 2020b)	Unlikely	Minor	Low
Potential for delays and disruptions affecting school bus routes, as well as perceived safety risks due to construction traffic on school bus routes. This may occur in Narromine, Narrabri and Curban where the proposal site crosses school bus routes or where school bus routes are also construction vehicle routes in some places.	School bus services and users in the local study area particularly Narromine, Curban and Narrabri	Low Negative	A traffic, transport and access management plan would be developed in consultation with local bus operators to minimise these risks.	<i>ARTC Inland Rail Narromine to Narrabri Traffic and Transport Assessment</i> (JacobsGHD, 2020b)	Unlikely	Minimal	Low

Potential impact description	Stakeholders affected	Risk/benefit rating	Management and mitigation measures	Relevant EIS technical study	Likelihood	Consequence	Residual risk rating
<b>Impacts on social infrastructure</b>							
Narrabri Dirt Bike Club would be impacted by the land requirements for rail infrastructure as well as temporary lease of land during construction. This would affect sections of the grass track and access to the facility. As a volunteer organisation, the club is concerned about the resources and time required to negotiate reconfiguration and design of the track, and potential loss of members if the grass track was closed	Narrabri Dirt Bike Club	Extreme Negative	ARTC would continue to consult with Narrabri Dirt Bike Club, Narrabri Council and Department of Planning, Industry and Environment (Crown Lands) in relation to the temporary and permanent land requirements at the club site, the potential impacts on the club's facilities, and measures to address the identified impacts.	<p><i>ARTC Inland Rail Narromine to Narrabri Noise and Vibration Assessment – Construction and Other Operations (JacobsGHD, 2020f)</i></p> <p><i>ARTC Inland Rail Narromine to Narrabri Landscape and Visual Assessment (JacobsGHD, 2020c)</i></p> <p>Air quality assessment presented in chapter B10 and Appendix I of EIS</p>	Possible	Minor	Moderate

Potential impact description	Stakeholders affected	Risk/benefit rating	Management and mitigation measures	Relevant EIS technical study	Likelihood	Consequence	Residual risk rating
Potential for amenity and access impacts to users of Baradine Showgrounds due to the location of temporary workforce accommodation facility within the showgrounds.	Users of Baradine Showground	Moderate Negative	<p>ARTC would continue to consult with The Baradine Showground Trust to manage access and temporary land requirements at the showground.</p> <p>Relevant plans in the CEMP would include measures to minimise the impacts of construction and the temporary workforce accommodation facility on local amenity (including but not limited to noise, vibration, dust and visual impacts).</p> <p>The communication management plan would include measures to ensure that community members affected by construction activities are notified in a timely manner.</p>	<p><i>ARTC Inland Rail Narromine to Narrabri Noise and Vibration Assessment – Construction and Other Operations (JacobsGHD, 2020f)</i></p> <p><i>ARTC Inland Rail Narromine to Narrabri Landscape and Visual Assessment (JacobsGHD, 2020c)</i></p>	Unlikely	Minimal	Low

Potential impact description	Stakeholders affected	Risk/benefit rating	Management and mitigation measures	Relevant EIS technical study	Likelihood	Consequence	Residual risk rating
Potential noise, dust and traffic impacts during facility establishment for residents of Jack Towney Hostel, which is adjacent to the proposed Gilgandra temporary workforce accommodation facility. Proximity of the facility to the hostel as well as the presence of workers may also lead to concerns about privacy and security for residents. The hostel caters to Aboriginal and Torres Strait Islander seniors, who may be more sensitive to these impacts.	Jack Towney Hostel residents	High Negative	Relevant plans in the CEMP would include measures to minimise the impacts of construction and the temporary workforce accommodation facility on local amenity (including but not limited to noise, vibration, dust and visual impacts). The communication management plan would include measures to ensure that community members affected by construction activities are notified in a timely manner.	<i>ARTC Inland Rail Narromine to Narrabri Noise and Vibration Assessment – Construction and Other Operations (JacobsGHD, 2020f)</i> <i>ARTC Inland Rail Narromine to Narrabri Landscape and Visual Assessment (JacobsGHD, 2020c)</i>	Unlikely	Minor	Low

Potential impact description	Stakeholders affected	Risk/benefit rating	Management and mitigation measures	Relevant EIS technical study	Likelihood	Consequence	Residual risk rating
Increased noise and dust from construction activities could affect enjoyment of Narromine Golf Course for some users at times. However, construction works at this location are expected to be limited, and any impacts would be temporary.	Narromine Golf Club and customers	Low Negative	<p>Relevant plans in the CEMP would include measures to minimise the impacts of construction and the temporary workforce accommodation facility on local amenity (including but not limited to noise, vibration, dust and visual impacts).</p> <p>The communication management plan would include measures to ensure that community members affected by construction activities are notified in a timely manner.</p>	<p><i>ARTC Inland Rail Narromine to Narrabri Noise and Vibration Assessment – Construction and Other Operations (JacobsGHD, 2020f)</i></p> <p>Air quality assessment presented in chapter B10 and Appendix I of EIS</p>	Unlikely	Minimal	Low

Potential impact description	Stakeholders affected	Risk/benefit rating	Management and mitigation measures	Relevant EIS technical study	Likelihood	Consequence	Residual risk rating
Some users of the Pilliga forests close to construction activities and undertaking activities that rely on a peaceful environment, such as birdwatching, bushwalking and picnicking, could experience reduced enjoyment. However given the size of the Pilliga forests, it is expected that most users could undertake activities in other parts of the forest and would therefore not be deterred from visiting the forest. However, there would likely be some users who are more sensitive to impacts on the forest, such as local Aboriginal people.	Users of Pilliga forests	Moderate Negative	<p>Relevant plans in the CEMP would include measures to minimise the impacts of construction and the temporary workforce accommodation facility on local amenity (including but not limited to noise, vibration, dust and visual impacts).</p> <p>The communication management plan would include measures to ensure that community members affected by construction activities are notified in a timely manner.</p>	<p><i>ARTC Inland Rail Narromine to Narrabri Noise and Vibration Assessment – Construction and Other Operations (JacobsGHD, 2020f)</i></p> <p><i>ARTC Inland Rail Narromine to Narrabri Landscape and Visual Assessment (JacobsGHD, 2020c)</i></p> <p>Air quality assessment presented in chapter B10 and Appendix I of EIS</p>	Unlikely	Minimal	Low



Potential impact description	Stakeholders affected	Risk/benefit rating	Management and mitigation measures	Relevant EIS technical study	Likelihood	Consequence	Residual risk rating
Construction of the Macquarie River bridge near Narromine may reduce the amenity of Three Mile Reserve, which is a popular swimming area and has significance to the local Aboriginal community. User's enjoyment of the river in this location could be affected, and there is potential for some users of the reserve to be deterred from using the area when some construction activities are taking place. Local Aboriginal communities and users of the waterways may be more sensitive to these changes.	Users of Three Mile Reserve	Moderate Negative	<p>Relevant plans in the CEMP would include measures to minimise the impacts of construction and the temporary workforce accommodation facility on local amenity (including but not limited to noise, vibration, dust and visual impacts).</p> <p>The communication management plan would ensure that community members affected by construction activities are notified in a timely manner.</p>	<p><i>ARTC Inland Rail Narromine to Narrabri Noise and Vibration Assessment – Construction and Other Operations (JacobsGHD, 2020f)</i></p> <p><i>ARTC Inland Rail Narromine to Narrabri Landscape and Visual Assessment (JacobsGHD, 2020c)</i></p> <p>Air quality assessment presented in chapter B10 and Appendix I of EIS</p>	Possible	Minimal	Low

Potential impact description	Stakeholders affected	Risk/benefit rating	Management and mitigation measures	Relevant EIS technical study	Likelihood	Consequence	Residual risk rating
Potential for the non-resident construction workforce to access community services and recreational facilities in towns hosting temporary workforce accommodation facilities. It is expected that most services and facilities would have capacity to meet the increased demand. However the baseline indicates there may be some existing challenges for local health service provision, such as long wait times for local GPs. There is potential for the construction workforce to exacerbate these challenges in host towns of Narromine, Gilgandra, Baradine and Narrabri. Social Assessment consultation also indicates some local emergency services may need to increase staffing levels in host towns.	Local medical and emergency services in Narromine, Gilgandra, Baradine and Narrabri.	Moderate Negative	The project-specific workforce management plan would include measures to manage potential impacts of the non-resident construction workforce on local communities, including community and health services. This would include consultation with relevant Councils and local health service providers to develop appropriate processes and measures to manage potential increased demand on health and emergency services.	N/A	Unlikely	Minimal	Low
Potential increase to emergency service response times due to changes in access and road conditions, however, access would be maintained for emergency vehicles along the public road network during construction, with suitable alternative access arrangements provided where required.	Regional and local emergency services	Moderate Negative	The communication management plan would include measures to ensure ongoing consultation with local emergency services providers during detailed design and construction to inform providers about the locations of level crossings and changes to access routes and road conditions.	<i>ARTC Inland Rail Narromine to Narrabri Traffic and Transport Assessment</i> (JacobsGHD, 2020b)	Unlikely	Minimal	Low

Potential impact description	Stakeholders affected	Risk/benefit rating	Management and mitigation measures	Relevant EIS technical study	Likelihood	Consequence	Residual risk rating
Potential for increased demand on emergency services due to risks associated with changes to flooding conditions as a result of construction activities.	Regional and local emergency services	Moderate Negative	The communication management plan would include measures to ensure ongoing consultation with local emergency services providers during detailed design and construction to inform providers about the locations of level crossings and changes to access routes and road conditions.	<i>ARTC Inland Rail Narromine to Narrabri Traffic and Transport Assessment</i> (JacobsGHD, 2020b) <i>ARTC Inland Rail Narromine to Narrabri Flooding and Hydrology Assessment</i> (JacobsGHD, 2020d)	Unlikely	Minimal	Low

**Table 10.3 Assessment of residual social risks – operation**

Potential impact description	Stakeholders affected	Risk / benefit rating	Management and mitigation measures		Likelihood	Consequence	Residual risk rating
<b>Economic development, industry and business</b>							
The estimated potential economic impact of the permanent removal of agricultural land is estimated to be a loss of about \$1.54 million which is equivalent to about 0.16% of the annual value of agricultural production in the regional study area. This would be offset by \$258.9 million in incremental benefits due to improvements in freight productivity, reliability and availability, and benefits to the community from crash reductions, reduced environmental externalities and road decongestion benefits. Agricultural industries in the regional study area would benefit from improvements in supply chain efficiency. In particular, the proposal would increase competition between road and rail freight modes, driving savings in freight costs, which would benefit producers, consumers and the regional community.	Regional agricultural industry and communities	Extreme Positive	No additional management and mitigation measures	<p><i>ARTC Inland Rail Narromine to Narrabri Economic Assessment</i> (KPMG, 2020)</p> <p><i>ARTC Inland Rail Narromine to Narrabri Agriculture and Land Use Assessment</i> (JacobsGHD, 2020a)</p>	Almost certain	Major	Extreme

Potential impact description	Stakeholders affected	Risk / benefit rating	Management and mitigation measures		Likelihood	Consequence	Residual risk rating
During operation, there may be some opportunities for local businesses to supply ARTC to assist with rail operations and maintenance.	Businesses in the local and regional study area	Low Positive	ARTC would continue to support local employment in accordance with the <i>Australian Jobs Act 2013</i> and Australian Industry Participation National Framework, and through the Inland Rail Academy to connect businesses with Inland Rail opportunities and key regional industries.	N/A	Possible	Minimal	Low
<b>Employment and training</b>							
Up to 10 skilled roles required for day-to-day operation. Given existing initiatives to train local workforce and attract skilled workers to the region, these roles are expected to be filled by the local workforce. There is also potential for these roles to attract skilled workers to the region, which would support objectives of regional development bodies and councils.	Skilled and unskilled workforce in the local and regional study area	Moderate Positive	ARTC would continue to support local employment in accordance with the <i>Australian Jobs Act 2013</i> and Australian Industry Participation National Framework, and through the Inland Rail Academy and the Inland Rail Academy to leverage training programs, upskill local residents, and young people, and connect businesses with Inland Rail opportunities and key regional industries.	N/A	Likely	Minor	Moderate

Potential impact description	Stakeholders affected	Risk / benefit rating	Management and mitigation measures		Likelihood	Consequence	Residual risk rating
<b>Property and landholder impacts</b>							
About 142 privately-owned properties would be impacted by land requirements for the proposal. This may disrupt internal property access, farming operations and operating costs, or change current farming practices for these properties.	Property owners, farm operators and staff in the local study area	High	ARTC would continue to consult with landowners and landholders affected by property acquisition. During the property acquisition process, ARTC would seek to secure agreement with affected landholders, to guide property-level design requirements.	<i>ARTC Inland Rail Narromine to Narrabri Agriculture and Land Use Assessment</i> (JacobsGHD, 2020a)	Possible	Minor	Moderate
Changes to the private road network where the rail corridor crosses existing access on private properties. This would impact access and connectivity for some landholders within their properties, impacting on the distances and time required for travel.  The proposal would be designed in accordance with relevant safety standards and requirements, including fencing of the corridor, as required, to manage potential safety risks relating to livestock and access to the corridor.	Property owners, farm operators and staff in the local study area	High	ARTC would continue to consult with landowners and landholders affected by property acquisition. During the property acquisition process, ARTC would seek to secure agreement with affected landholders, to guide property-level design requirements.	<i>ARTC Inland Rail Narromine to Narrabri Agriculture and Land Use Assessment</i> (JacobsGHD, 2020a)  <i>ARTC Inland Rail Narromine to Narrabri Traffic and Transport Assessment</i> (JacobsGHD, 2020b)	Unlikely	Minor	Low



Potential impact description	Stakeholders affected	Risk / benefit rating	Management and mitigation measures		Likelihood	Consequence	Residual risk rating
<b>Local amenity and community values</b>							
Up to 40 receivers along the proposal area would have the potential to experience increases in daytime and night-time noise in 2025, and an additional 26 receivers would have the potential to experience increased noise in 2040 when the number of trains increase. Predicted noise levels were above the maximum noise criteria within the night-time period at 39 receivers.  Increased noise has the potential to disrupt daily activities and night time noise has the potential to disturb night-time peacefulness.	Residents in the local study area close to proposal area	Moderate Negative	The noise levels experienced at residential properties would qualify for at-property controls, such as architectural property treatments and upgrades to property fencing.	<i>ARTC Inland Rail Narromine to Narrabri Noise and Vibration Assessment – Operational Rail (SLR, 2020)</i>	Unlikely	Minimal	Low
Visual changes as a result of new rail infrastructure, bridges and train movements may reduce local amenity, interrupt views and affect values associated with waterways and the landscape character. Local Aboriginal communities, residents, users of waterways may be more sensitive to these changes. However it is expected that community members would adapt to these visual changes over time and would not be deterred from using the river and reserve.	Residents in the local study area close to proposal area; Aboriginal communities and users of waterways in the local and regional study area	Moderate Negative	No additional management or mitigation required.	<i>ARTC Inland Rail Narromine to Narrabri Landscape and Visual Assessment (JacobsGHD, 2020c)</i>	Possible	Minor	Moderate

Potential impact description	Stakeholders affected	Risk / benefit rating	Management and mitigation measures		Likelihood	Consequence	Residual risk rating
<b>Access and connectivity</b>							
Public and private road closures or diversions may change the route some people need to use to access properties, local towns, schools and other destinations. This would lead to minimal impacts for some road users, with some increased travel distances and journey times for some people. New level crossings may also lead to minor delays, increasing travel time for some road users. It is expected community members would adapt to these changes over time.	Residents and users of the local road network, school bus operators and students in the local study area	Low Negative	No additional management or mitigation required.	ARTC Inland Rail Narromine to Narrabri Agriculture and Land Use Assessment (JacobsGHD, 2020a) ARTC Inland Rail Narromine to Narrabri Traffic and Transport Assessment (JacobsGHD, 2020b)	Unlikely	Minimal	Low
Risks to health and safety for pedestrians, motorists and livestock from potential collisions with trains at level crossings.	Communities in the local study area	High Negative	A rail safety awareness program would be developed and implemented prior to the operation of Inland Rail to educate the community regarding safety around trains. This would include landowners with properties intersected by the proposal.	ARTC Inland Rail Narromine to Narrabri Traffic and Transport Assessment (JacobsGHD, 2020b)	Unlikely	Catastrophic	High

Potential impact description	Stakeholders affected	Risk / benefit rating	Management and mitigation measures		Likelihood	Consequence	Residual risk rating
<b>Impacts to Social Infrastructure</b>							
Users of recreational facilities near the rail corridor (Narrabri Dirt Bike Club and Three Mile Reserve) may experience amenity changes due to the potential for increased noise and vibration and visual changes as a result of the proposal. This is not expected to deter most users due to the nature of these facilities.	Users of Narrabri Dirt Bike Club and Three Mile Reserve	Low Negative	No additional mitigation or management required.	ARTC Inland Rail Narromine to Narrabri Noise and Vibration Assessment – Operational Rail (SLR, 2020) ARTC Inland Rail Narromine to Narrabri Landscape and Visual Assessment (JacobsGHD, 2020c)	Unlikely	Minimal	Low
Emergency services could experience increased response times due to delays at level crossings, particularly the level crossing at Castlereagh Highway. Demand for emergency services could also increase due to increased safety risks associated with illegal crossings while trains are approaching, although the likelihood of an accident occurring is low.	Regional and local emergency service providers	Moderate Negative	A rail safety awareness program would be developed and implemented prior to the operation of Inland Rail to educate the community regarding safety around trains. This would include landowners with properties intersected by the proposal. Emergency services would be consulted during detailed design to ensure they are aware of accessible routes in case of level crossing delays.	ARTC Inland Rail Narromine to Narrabri Traffic and Transport Assessment (JacobsGHD, 2020b) ARTC Inland Rail Narromine to Narrabri Flooding and Hydrology Assessment (JacobsGHD, 2020d)	Unlikely	Minor	Low

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# 11 Conclusion

This report provides the results of a social assessment of the proposal. It includes a description of the existing social baseline conditions of potentially affected communities near the proposal site, an assessment of potential changes to social conditions from the construction and operation of the proposal, and recommended mitigation and management measures to enhance the proposal's benefits and avoid, manage or mitigate its potential social impacts.

The key social benefits with the potential to occur during construction are summarised below:

- Expansion of the regional Construction sector, Professional, Scientific and Technical Services sector, and Wholesale Trade sector due to direct and indirect employment opportunities.
- Increased demand for goods and services would provide procurement opportunities for local and Indigenous businesses to subcontract to the primary construction contractor.
- Some businesses in regional towns hosting temporary workforce accommodation facilities may benefit from the non-resident construction workforce spending their wages.
- Construction employment opportunities for skilled workforce, and opportunities for upskilling to meet construction training requirements.

The key social benefits with the potential to occur during operation of the proposal are summarised below:

- Improvements in freight productivity, reliability and availability, and benefits to the community from crash reductions, reduced environmental externalities and road decongestion benefits. Agricultural industries in the region will particularly benefit from improvements in supply chain efficiency.
- There may be some opportunities for local businesses to supply ARTC in relation to rail operations and maintenance.
- There may be up to 10 employment opportunities for skilled workforce in the region during operation, or these roles could attract skilled workers to the region.
- Overall improved travel times and road safety by reducing the volume of intercity freight trucks on the Newell Highway.

The key social impacts with the potential to occur during construction are summarised below:

- Disruption to lifestyles and livelihoods for landholders resulting from land requirements for the proposal, which may disrupt internal property access due to severed or fragmented land, and/or temporary lease of land. This may reduce efficiency and viability of farming operations, increase costs, and require changes to farming practices.
- Uncertainty and stress for some landholders affected by land requirements for the proposal, leading to the potential for individual and community wellbeing impacts for some.
- Reduced amenity for residents and community members in close proximity to construction activities which may affect people's daily activities and impact community values related to rural amenity.
- Some amenity impacts for residences and community facilities in close proximity to temporary workforce accommodation facilities, and impacts associated with a non-resident construction workforce such as demand on local services and potential wellbeing concerns.
- Minor delays and disruptions due to construction traffic and temporary changes to road conditions which may increase travel times.

- Impacts on Narrabri Dirt Bike Club which would be subject to partial land requirements.
- Potential impacts on emergency services due to changes to access and road conditions.

The key social impacts with the potential to occur during operation of the proposal are summarised below:

- Properties along the proposal area may be impacted in varying ways due to new rail infrastructure, such as disrupted internal property access, farming operations and operating costs, or change current farming practices for these properties.
- Changes to access arrangements within private properties due to closure of private roads which may increase travel times and routes for property owners, and increase safety risks.
- Amenity changes resulting from operation of trains due to noise, vibration and visual changes, which could affect the way of life for nearby residents and community members.
- Closures of private and public roads may result in changes to the way community members access properties, towns and community facilities and services.
- Potential increased health and safety risks at new level crossings due to possible collisions between trains and pedestrians, motorists and livestock.
- Potential for increased emergency response times due to delays at level crossings and increased demand due to safety risks associated with new level crossings.

Various mitigation and management measures have been identified to address social impacts identified in this report. These include development and implementation of the following project-specific plans by the primary contractor:

- industry participation plan
- workforce management plan
- communication management plan
- temporary workforce accommodation plan.

These are in addition to the mitigation measures recommended in other EIS technical studies that would help to address social impacts, and the various longer-term strategies ARTC has been implementing to manage negative impacts and enhance the benefits of the overall Inland Rail program during pre-construction, construction and operation phases.

ARTC would prepare a Social Impact Management Plan (SIMP) which would provide a detailed plan for how the impacts and opportunities identified in this report would be managed and mitigated from approval of the proposal through detailed design and construction.. This would include roles and responsibilities for the stakeholders involved in managing social impacts and enhancing opportunities. The SIMP will specify detailed management measures supported by appropriate monitoring and reporting requirements.



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# Appendices

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# TECHNICAL REPORT

# 13

## Social assessment

### **Appendix A** SIA scoping tool

NARROMINE TO NARRABRI ENVIRONMENTAL IMPACT STATEMENT



**Table A1 SIA scoping tool – SIA worksheet**

Social and environmental matters		Outline of likely impact	With regard to the matter expected to be impacted, will there be a social impact?		Are the impacts on the matter expected to require a non-SIA specialist study?	Will the non-SIA specialist study address the social impact?	Level of assessment for the social impact in the SIA
			Yes/No	If yes, outline the social impact. If no, outline why.			
Amenity	Acoustic	Construction: construction activities may impact nearby sensitive receivers (ie. Residences and community facilities and recreation areas); residences and community facilities close to temporary workforce accommodation facilities may experience noise  Operations: rail freight noise may impact nearby sensitive receivers (ie. residences)	Yes	Potential for disturbance to way of life for residents or users of community facilities and recreation areas	Yes – Noise and Vibration Assessment	Yes – in part	Standard SIA
	Visual	Construction: increased traffic including heavy vehicles; construction compounds and stockpiles may impact on amenity for nearby sensitive receivers (ie. residences), views of construction activities from recreational areas  Operations: rail freight movements and views of new infrastructure may impact nearby sensitive receivers (ie. residences)	Yes	Potential for disturbance to way of life for residents or users of community facilities and recreation areas	Yes – Landscape and Visual Amenity Assessment	Yes – in part	Standard SIA
	Odour	Not likely to be impacted	No				
	Microclimate	Not likely to be impacted	No				

Social and environmental matters		Outline of likely impact	With regard to the matter expected to be impacted, will there be a social impact?		Are the impacts on the matter expected to require a non-SIA specialist study?	Will the non-SIA specialist study address the social impact?	Level of assessment for the social impact in the SIA
			Yes/No	If yes, outline the social impact. If no, outline why.			
Access	Access to property	Construction and operation: property requirements may alter and movements within/across property	Yes	Potential for severance of properties / interrupted access disrupting way of life and agricultural activities. Uncertainty and stress leading to health and wellbeing impacts for affected property owners	Yes – Agriculture and Land Use Assessment	Yes – in part	Standard SIA
	Utilities	Some disturbance to properties in construction	Yes	Some disruption to daily life for affected landholders	Yes – Agriculture and Land Use Assessment	Yes – fully	Desktop SIA
	Road and rail network	Construction: increased traffic on road networks (including heavy vehicles) resulting in delays, temporary road closures, for road users Operations: road closures changing road conditions	Yes	Potential for increased travel times due to construction activities and permanent changes	Yes – Traffic and Transport Assessment	Yes – in part	Standard SIA
	Offsite parking	Construction: presence of construction workforce may require offsite parking, though likely to be minimal Operations: no impact	No	No social impact expected Operations: no impact	Yes – Traffic and Transport Assessment	Yes – fully	No SIA required

Social and environmental matters		Outline of likely impact	With regard to the matter expected to be impacted, will there be a social impact?		Are the impacts on the matter expected to require a non-SIA specialist study?	Will the non-SIA specialist study address the social impact?	Level of assessment for the social impact in the SIA
			Yes/No	If yes, outline the social impact. If no, outline why.			
Built environment	Public domain	Unlikely to be affected	No	No social impact expected	No	n/a	No SIA required
	Public infrastructure	During construction there would be closures of roads and rail lines at times	Yes	Potential for increased travel times due to construction activities	Yes – Traffic and Transport Assessment	Yes – fully	Desktop SIA
	Other built assets	Unlikely to be affected	No	No social impact expected	No	n/a	No SIA required
Heritage	Natural	Construction: construction activities in national/state parks impacting on amenity values Operations: the proposal traverses national and state parks which could reduce amenity values	Yes	Potential for amenity values of communities to be affected	Yes – Biodiversity assessment	Yes - fully	Desktop SIA
	Cultural	Construction - historic items will be affected	Yes	Potential for values associated with heritage to be affected	Yes	Yes – fully	Desktop SIA
	Aboriginal cultural	Construction - cultural heritage items will be affected	Yes	Potential for values associated with heritage to be affected	Yes	Yes – fully	Desktop SIA
	Built	Unlikely to be affected	No	Unlikely to occur	No	No	No SIA required



Social and environmental matters		Outline of likely impact	With regard to the matter expected to be impacted, will there be a social impact?		Are the impacts on the matter expected to require a non-SIA specialist study?	Will the non-SIA specialist study address the social impact?	Level of assessment for the social impact in the SIA
			Yes/No	If yes, outline the social impact. If no, outline why.			
Community	Health	Construction: uncertainty around property fragmentation; stress associated with changes to road networks and property access/movement; potential increased demand on health services due to non-resident workforce Operations: unknown	Yes	Potential for health and wellbeing impacts for property owners; increased demand on health services due to temporary non-resident workforce	No	No	Comprehensive SIA
	Safety	Construction: increased traffic on road network due to heavy constructive vehicles reducing perceptions of safety Operations: new rail crossings on local road network impacting safety perceptions	Yes	Potential perceived safety impacts during construction and potential actual safety impacts during operation due to new rail crossings and need for behaviour change	Yes – addressed in several other technical studies	Yes – in part	Standard SIA
	Services and facilities	Construction: construction workforce placing demand on existing nearby services and facilities in towns hosting temporary workforce accommodation facilities Operations: no impact	Yes	Increased demand on health and emergency services due to temporary non-resident workforce	No	No	Comprehensive SIA

Social and environmental matters	Outline of likely impact	With regard to the matter expected to be impacted, will there be a social impact?		Are the impacts on the matter expected to require a non-SIA specialist study?	Will the non-SIA specialist study address the social impact?	Level of assessment for the social impact in the SIA
		Yes/No	If yes, outline the social impact. If no, outline why.			
Housing	Construction: impacts to local cohesion due to temporary non-resident workforce Operations: unknown	Yes	Temporary accommodation facilities would be sufficient for entire construction workforce, there may be some specialists who stay in local tourist facilities at times, this increased demand is expected to be minor and not increase demand in the region	No	No	Comprehensive SIA
Cohesion, capital and resilience	Construction: Construction workforce (including consultants) not housed in temporary workforce accommodation facilities could place minor demand on existing nearby accommodation facilities Operations: no impact	Yes	Potential for communities hosting non-resident workforce to be concerned about social cohesion impacts and perceived decreased safety	No	No	Comprehensive SIA

Social and environmental matters	Outline of likely impact	With regard to the matter expected to be impacted, will there be a social impact?		Are the impacts on the matter expected to require a non-SIA specialist study?	Will the non-SIA specialist study address the social impact?	Level of assessment for the social impact in the SIA
		Yes/No	If yes, outline the social impact. If no, outline why.			
Economic	Natural resource use	Yes	Potential for proposal land requirements to affect operations of agricultural businesses and impact livelihoods	Yes – Land Use and Agricultural Assessment	Yes – in part	Standard SIA
	Livelihood	Yes	Significant employment opportunities in construction for local workforce; very minor operational employment opportunities	Yes – Economic Assessment	Yes – in part	Standard SIA
	Business opportunity	Yes	Procurement opportunities for local businesses	Yes – Economic Assessment	Yes – in part	Standard SIA
Air	Particulate matter	Yes	Potential dust during construction likely to be managed but may be noticeable to nearby community members; potential for dust from operating trains to affect nearby communities	Yes – Air Quality Assessment	Yes – in part	Standard SIA

Social and environmental matters		Outline of likely impact	With regard to the matter expected to be impacted, will there be a social impact?		Are the impacts on the matter expected to require a non-SIA specialist study?	Will the non-SIA specialist study address the social impact?	Level of assessment for the social impact in the SIA
			Yes/No	If yes, outline the social impact. If no, outline why.			
	Gases	Unlikely	No				No SIA required
	Atmospheric emissions	Unlikely	No				No SIA required
Biodiversity	Native vegetation	Construction: clearing of native vegetation	Yes	Potential for ecological values associated with biodiversity to be affected	Yes – Biodiversity Assessment	Yes – fully	Desktop SIA
	Native fauna	Construction: clearing of koala habitat	Yes	Potential for values associated with native fauna to be affected	Yes – Biodiversity Assessment	Yes – fully	Desktop SIA
Land	Stability and/or structure	Not likely to be impacted	No				No SIA required
	Social chemistry	Not likely to be impacted	No				No SIA required
	Capability	Not likely to be impacted	No				No SIA required
	Topography	Not likely to be impacted	No				No SIA required
Water	Water quality	Not likely to be impacted	No				
	Water availability	Construction: construction water requirements from groundwater bores	No	Potential for changes to flooding and hydrology to affect use of water by agricultural users	Yes – Flooding and hydrology assessment	Yes - fully	Desktop SIA
	Hydrological flows	Operation: potential for changes to flooding conditions	No	Potential for changes to flooding and hydrology to affect use of water by agricultural users	Yes – Flooding and hydrology assessment	Yes - fully	Desktop SIA

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### **Appendix B** Detailed demographic and economic data

NARROMINE TO NARRABRI ENVIRONMENTAL IMPACT STATEMENT



**Table B1 Journey to work data, 2016**

	Narromine LGA	Dubbo Regional LGA	Gilgandra LGA	Coonamble LGA	Warrumbungle LGA	Narrabri LGA	NSW
Car (as driver or passenger)	67.6%	78.2%	61.9%	63.7%	59.4%	70.5%	63.7%
Public transport	0.3%	0.5%	0.2%	0.7%	0.6%	1.3%	16.1%
Bus	0.3%	0.4%	0.2%	0.7%	0.6%	1.3%	4.4%
Active transport	6.7%	3.6%	7.5%	7.8%	8.8%	5.4%	4.6%
Walked only	6.2%	3.2%	7.2%	7.5%	8.7%	5.2%	3.9%
Worked at home	11.6%	4.4%	14.7%	14.8%	14.8%	8.6%	4.8%

Source: ABS Census, 2016

**Table B2 Selected crime statistics – rate per 100,000 persons**

Area	2014	2015	2016	2017	2018
<b>Assault – non-domestic violence</b>					
Coonamble	991.8	1,124.4	1,184.9	1,017.1	1,240.4
Gilgandra	593.3	575.8	535.1	376.7	635.7
Narrabri	660.2	691.0	650.9	662.8	587.4
Narromine	922.5	1,019.8	801.0	684.1	653.7
Dubbo	794.9	639.2	749.0	794.8	792.9
Warrumbungle	516.0	530.0	470.6	433.8	433.8
NSW	423.1	405.1	410.8	409.7	403.2
<b>Break and enter – dwelling</b>					
Coonamble	2,394.8	2,615.5	2,715.4	2,431.2	2,158.3
Dubbo Regional	1,399.0	1,327.5	1,873.4	1,176.8	1,269.0
Gilgandra	1,802.8	1,427.9	860.9	541.6	847.7
Narrabri	630.6	854.4	800.5	519.7	640.2
Narromine	848.1	1,574.7	1,481.0	881.7	1,353.0
Warrumbungle Shire	381.9	478.1	428.8	423.2	402.1
NSW	452.6	415.2	384.3	353.8	337.1
<b>Steal from a person</b>					
Coonamble	24.2	146.7	24.7	49.6	173.7
Dubbo Regional	103.3	82.6	108.9	76.8	92.1
Narrabri	14.8	7.4	29.9	15.1	-
Narromine	104.2	75.0	166.2	60.8	106.4



Area	2014	2015	2016	2017	2018
Warrumbungle Shire	10.3	20.8	10.5	21.2	21.2
NSW	81.8	75.1	64.2	58.0	53.8
<b>Steal from a dwelling</b>					
Coonamble	991.8	953.3	1,036.8	620.2	992.3
Dubbo Regional	478.9	554.6	731.5	493.4	503.0
Gilgandra	410.8	598.8	511.9	588.7	376.7
Narrabri	452.5	438.4	531.2	466.9	376.6
Narromine	833.2	1,079.8	1,012.5	608.1	820.9
Warrumbungle Shire	516.0	488.5	366.0	328.0	370.3
NSW	298.3	281.9	276.1	248.7	244.4
<b>Sexual offences</b>					
Coonamble	604.7	146.7	370.3	347.3	446.5
Dubbo Regional	393.5	330.4	359.9	347.5	378.2
Gilgandra	205.4	253.3	349.0	329.6	353.2
Narrabri	200.3	170.9	172.1	180.8	241.0
Narromine	357.1	299.9	272.0	456.1	304.0
Warrumbungle Shire	299.3	270.2	512.4	391.5	317.4
NSW	154.4	155.6	158.6	172.1	174.0

Source: NSW Bureau of Crime Statistics and Research

**Table B3 Rental affordability (November 2018)**

Cohort	Coonamble	Gilgandra	Narrabri	Narromine	Dubbo	Warrumbungle
Pensioner couple	Severely unaffordable	Severely unaffordable	Extremely unaffordable	Severely unaffordable	Extremely unaffordable	Severely unaffordable
Single part time worker parent on benefits	Moderately unaffordable	Unaffordable	Severely unaffordable	Unaffordable	Severely unaffordable	Unaffordable
Single working parent	Very affordable	Very affordable	Acceptable	Affordable	Affordable	Very affordable
Single income couple with children	Very affordable	Very affordable	Acceptable	Affordable	Affordable	Very affordable
Dual income couple with children	Very affordable	Very affordable	Very affordable	Very affordable	Very affordable	Very affordable
Student share house	Very affordable	Affordable	Moderately unaffordable	Acceptable	Acceptable	Affordable
Minimum wage couple	Very affordable	Affordable	Acceptable	Affordable	Acceptable	Affordable
Hospitality worker	Affordable	Acceptable	Unaffordable	Moderately unaffordable	Unaffordable	Acceptable

Source: SGS Planning, National Shelter, Community Sector Banking, and Brotherhood of St Laurence (2019) Rental Affordability Index – November 2018.

GHD has modified the results of the RAI to show the affordability based on all households. It is noted that the standard RAI assumes that a number of cohorts (eg hospitality worker) would occupy a dwelling size (eg one bedroom flat) for which there is insufficient data to estimate affordability. This is because in there is often limited smaller dwellings (such as one-bedroom flats) in the stock available regional areas. Consequently, utilising smaller dwellings in the RAI provides an inaccurate view of affordable housing availability in regional areas.

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### **Appendix C** Overview of community facilities in the towns in the study area

NARROMINE TO NARRABRI ENVIRONMENTAL IMPACT STATEMENT



**Table C1 Overview of community facilities located in Narromine**

Type	Description
Emergency services	<ul style="list-style-type: none"> <li>• fire and rescue</li> <li>• ambulance</li> <li>• police</li> </ul>
Health	<ul style="list-style-type: none"> <li>• Narromine Hospital and Community Health</li> <li>• Narromine Shire Medical Centre</li> </ul>
Education	<ul style="list-style-type: none"> <li>• St Augustines Parish School</li> <li>• Narromine High School</li> <li>• Narromine Public School</li> <li>• Narromine Christian School</li> </ul>
Community and cultural venues	<ul style="list-style-type: none"> <li>• Narromine Showground</li> <li>• Library</li> <li>• Aviation Museum</li> </ul>
Sport and recreation facilities	<ul style="list-style-type: none"> <li>• Narromine Bowling Club</li> <li>• Narromine Clay Target Club</li> <li>• Cale Oval</li> <li>• Sports and Fitness Centre</li> <li>• Aquatic Centre</li> <li>• Golf Club</li> <li>• Squash Courts</li> <li>• Gliding Club</li> <li>• Racecourse</li> </ul>
Local open spaces	<ul style="list-style-type: none"> <li>• Narromine Wetlands</li> <li>• Three Mile Reserve</li> <li>• Dundas Park</li> <li>• Payten Park</li> <li>• Yarra Farm</li> <li>• Rotary Park</li> </ul>

**Table C2 Overview of community facilities located in Dubbo**

Type	Description
Emergency services	<ul style="list-style-type: none"> <li>• fire and rescue</li> <li>• ambulance</li> <li>• police</li> </ul>
Health	<ul style="list-style-type: none"> <li>• Dubbo Base Hospital</li> <li>• Lourdes Hospital and Community Health Service</li> <li>• Dubbo Private Hospital</li> <li>• several medical centres</li> </ul>
Education	<ul style="list-style-type: none"> <li>• Charles Sturt University</li> <li>• TAFE Western – Dubbo</li> <li>• several government and non-government schools</li> </ul>

Type	Description
Community and cultural venues	<ul style="list-style-type: none"> <li>• Dubbo Regional Theatre and Convention Centre</li> <li>• Western Plains Cultural Centre</li> <li>• Taronga Western Plains Zoo</li> <li>• Old Dubbo Gaol</li> <li>• Macquarie Regional Library</li> </ul>
Sport and recreation facilities	<ul style="list-style-type: none"> <li>• Dubbo Aquatic Centre</li> <li>• Victoria Park No. 1, 2 &amp; 3 Ovals</li> <li>• Apex Oval</li> <li>• Jubilee Park</li> <li>• South Dubbo Park</li> <li>• Lady Cutler Park</li> <li>• Hans Claven Fields</li> <li>• Powter Park</li> </ul>

**Table C3 Overview of community facilities located in Gilgandra**

Type	Description
Emergency services	<ul style="list-style-type: none"> <li>• fire and rescue</li> <li>• ambulance</li> <li>• police</li> </ul>
Health	<ul style="list-style-type: none"> <li>• Gilgandra Multipurpose Health Service</li> <li>• Gilgandra Medical Centre</li> <li>• Aboriginal Maternal Infant Health</li> <li>• Jack Towney Hostel</li> </ul>
Education	<ul style="list-style-type: none"> <li>• TAFE NSW Gilgandra</li> <li>• Local schools</li> <li>• Aussie Kindies Early Learning Centre</li> </ul>
Community and cultural venues	<ul style="list-style-type: none"> <li>• Gilgandra Shire Library</li> <li>• Art Gallery</li> <li>• Coo-ee Heritage and Visitor Information Centre</li> <li>• Gilgandra Showground</li> <li>• Gilgandra Rural Museum</li> <li>• Curban Community Hall</li> </ul>
Sport and recreation facilities	<ul style="list-style-type: none"> <li>• Gilgandra Fitness Centre</li> <li>• Gilgandra Swimming Pool</li> <li>• Ernie Knight Oval</li> <li>• Anthony McGrane Oval and Sporting Complex</li> <li>• Gilgandra Racecourse and Golf Course</li> </ul>
Local open spaces	<ul style="list-style-type: none"> <li>• Gilgandra State Forest</li> <li>• Eringanerin State Forest</li> <li>• Cooee March Memorial Park</li> <li>• Clarice Scholz Park</li> <li>• Hunter Park</li> </ul>

**Table C4 Overview of community facilities located in Coonamble**

Type	Description
Emergency services	<ul style="list-style-type: none"> <li>• fire and rescue</li> <li>• ambulance</li> <li>• police</li> </ul>
Health	<ul style="list-style-type: none"> <li>• Coonamble Aboriginal Health Service</li> <li>• Coonamble Multi-Purpose Service (Hospital)</li> <li>• Castlereagh Medical Centre</li> <li>• Gulargambone Multi-Purpose Health Service</li> </ul>
Education	<ul style="list-style-type: none"> <li>• TAFE NSW</li> <li>• Local schools</li> <li>• Gulargambone Central School</li> </ul>
Community and cultural venues	<ul style="list-style-type: none"> <li>• Outback Arts</li> <li>• Coonamble Neighbourhood Centre</li> <li>• Coonamble Showground</li> <li>• Coonamble Museum</li> <li>• Coonamble Library</li> </ul>
Sport and recreation facilities	<ul style="list-style-type: none"> <li>• Coonamble Pool</li> <li>• Bowling Club</li> <li>• Coonamble Oval</li> <li>• Coonamble Netball Courts</li> </ul>
Local open spaces	<ul style="list-style-type: none"> <li>• Smith Park</li> </ul>

**Table C5 Overview of community facilities located in Coonabarabran**

Type	Description
Emergency services	<ul style="list-style-type: none"> <li>• fire and rescue</li> <li>• ambulance</li> <li>• police</li> </ul>
Health	<ul style="list-style-type: none"> <li>• Coonabarabran Health Service</li> <li>• Coonabarabran Primary and Community Health</li> <li>• Coonabarabran Medical Centre</li> <li>• Baradine Multi Purpose Health Service</li> </ul>
Education	<ul style="list-style-type: none"> <li>• TAFE NSW</li> <li>• Local schools</li> <li>• Baradine Central School</li> <li>• St Johns Baradine Catholic School</li> </ul>
Community and cultural venues	<ul style="list-style-type: none"> <li>• Macquarie Regional Library – Coonabarabran</li> <li>• Coonabarabran Showgrounds</li> <li>• Sports and Recreation Centre Hall</li> <li>• Town Hall</li> </ul>



Type	Description
Sport and recreation facilities	<ul style="list-style-type: none"> <li>• Coonabarabran Memorial Swimming Pool</li> <li>• Coonabarabran Oval</li> <li>• Goanna Tracks MX</li> <li>• Enduro Complex</li> <li>• Baradine Memorial Swimming Pool</li> <li>• Baradine Town Oval</li> </ul>
Local open spaces	<ul style="list-style-type: none"> <li>• The Warrumbungle Ranges</li> <li>• Pilliga forests</li> </ul>

**Table C6 Overview of community facilities located in Narrabri**

Type	Description
Emergency services	<ul style="list-style-type: none"> <li>• Police</li> <li>• Ambulance</li> <li>• fire and rescue</li> <li>• rural fire</li> <li>• state emergency services</li> </ul>
Health	<ul style="list-style-type: none"> <li>• Narrabri Hospital – Narrabri District Health Service</li> <li>• Narrabri Community Health Centre</li> <li>• Several medical centres</li> </ul>
Education	<ul style="list-style-type: none"> <li>• TAFE NSW</li> <li>• Local schools</li> </ul>
Community and cultural venues	<ul style="list-style-type: none"> <li>• Narrabri Library</li> <li>• Air League Hall</li> <li>• Narrabri Memorial and Citizens Club</li> <li>• Narrabri Showground</li> <li>• Narrabri Old Gaol and Museum</li> <li>• The Crossing Theatre</li> <li>• Sporting Wall of Fame</li> <li>• Narrabri Neighbourhood Centre</li> </ul>
Sport and recreation facilities	<ul style="list-style-type: none"> <li>• Hogan Oval, Narrabri Racecourse</li> <li>• Leitch Oval</li> <li>• Gately Field</li> <li>• Cooma Oval</li> <li>• Narrabri Paceway</li> <li>• Bowling Club</li> <li>• Golf Club</li> <li>• Skate Park</li> <li>• Aquatic Centre</li> </ul>
Local open spaces	<ul style="list-style-type: none"> <li>• Cameron Park</li> <li>• Dangar Park</li> <li>• Blanche Peardon Park</li> </ul>

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### **Appendix D** Indicative list of training providers in the study area

NARROMINE TO NARRABRI ENVIRONMENTAL IMPACT STATEMENT



**Table D1 Indicative list of training providers**

LGA	Overview of available training providers
Narromine	<ul style="list-style-type: none"> <li>• Joblink Plus Narromine</li> <li>• Sureway Narromine Office</li> </ul>
Dubbo	<ul style="list-style-type: none"> <li>• TAFE NSW</li> <li>• Western College – vocational courses</li> <li>• Orana Education and Training Co-operative Ltd</li> <li>• VERTO</li> <li>• CERT Chullora (ATS Rail provider)</li> <li>• HMC Group Solutions</li> <li>• RuralBiz</li> <li>• Breakthru Dubbo</li> <li>• Joblink Plus Dubbo</li> <li>• Sureway Dubbo Office</li> <li>• Assurance Training and Sales</li> </ul>
Coonamble	<ul style="list-style-type: none"> <li>• TAFE NSW</li> <li>• Aboriginal Engagement Consultants</li> <li>• READY Aboriginal training organisation</li> <li>• Sureway Coonamble Office</li> <li>• Joblink Plus Coonamble</li> <li>• Country Education Foundation</li> </ul>
Warrumbungle	<ul style="list-style-type: none"> <li>• TAFE NSW</li> <li>• Joblink</li> <li>• Jobplus</li> <li>• Breakthru Coonabanabran</li> </ul>
Narrabri	<ul style="list-style-type: none"> <li>• Jobs Australia</li> <li>• Joblink</li> <li>• Best Employment</li> <li>• TAFE NSW</li> <li>• Narrabri – Community College</li> <li>• National Safety Council of Australia</li> <li>• New England North West First Aid Training</li> </ul>

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### **Appendix E** Health services in the regional study area

NARROMINE TO NARRABRI ENVIRONMENTAL IMPACT STATEMENT



**Table E1 Health services**

LGA	Hospital or service	Counselling and mental health services
Narromine	Narromine Hospital and Community Health	Breakthru Narromine
	Narromine Shire Medical Centre	CentaCare
Dubbo	Dubbo Base Hospital	Balance Counselling
	Lourdes Hospital and Community Health Service	Headspace Dubbo
	Dubbo Health Service	PsychSolutions Health and Wellbeing
	Dubbo Private Hospital	Grace Counselling Coaching and Mediation Service
		Interrelate Central and Far West (Dubbo) and Family Relationship Centre
		Macquarie Psychology & Wellbeing
		CentaCare
		Western NSW Family Referral Service
		Uniting Burnside Family Options Dubbo
		Dubbo Psychologist
		Inspiration House Services Inc.
		Aboriginal AfterCare Statewide Services
		Macquarie Health Collective
		Insight Services Group – Dubbo
Gilgandra	Gilgandra Multipurpose Health Service	CentaCare Bathurst - Gilgandra
	Gilgandra Medical Centre	
	Aboriginal Maternal Infant Health	
	Jack Towney Hostel	
Coonamble	Coonamble Aboriginal Health Service	Wellways
	Coonamble Multi-Purpose Service	
	Castlereagh Medical Centre	
	Gulargambone Multi-Purpose Health Service	



LGA	Hospital or service	Counselling and mental health services
Warrumbungle	Coonabarabran Health Service	Breakthru Coonabarabran
	Coonabarabran Primary and Community Health	Wellways
	Coonabarabran Medical Centre	
	Baradine Multi-purpose Health Services	
Narrabri	Narrabri Community Health Centre	Anglicare Narrabri Office
	Narrabri District Hospital	HealthWISE
		CentaCare
		Boundless Psychology

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