

# APPENDIX



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## Social Impact Assessment Technical Report

NORTH STAR TO NSW/QUEENSLAND BORDER ENVIRONMENTAL IMPACT STATEMENT

ARTC

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

# Inland Rail North Star to Border Project Appendix O: Social Impact Assessment Technical Report



## **Inland Rail: North Star to NSW/Queensland Border Social Impact Assessment**

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## Abbreviations

ABS	Australian Bureau of Statistics
AEP	Australian Exceedance Probability
ARTC	Australian Rail Track Corporation
AMP	Accommodation Camp Management Plan
AEDC	Australian Early Development Census
CEMP	Construction Environmental Management Plan
CDEP	Community Development Employment Program
Ch	Chainage
CHMP	Cultural Heritage Management Plans
CNVMP	Construction Noise and Vibration Environmental Management Plan
CCC	Community Consultative Committee
CRG	Community Reference Group
COAG	Council of Australian Governments
CRG	Community Reference Group
Db(A)	Decibel levels weighted to approximate the way the human ear hears
DESSFB	Department of Employment, Skills, Small and Family Business
DFW	Domestic and family violence
DITCRD	Department of Infrastructure Transport Cities and Regional Development
DPI	Population Health Information Data Unit
DVO	Domestic violence order
EIA	Environmental Impact Assessment
EP&A Act	Environmental Planning and Assessment Act 1979
EIS	Environmental Impact Statement
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)
ERP	Estimated resident population
FTE	Full time equivalent
FRS	Fire and Rescue Service (NSW)
GP	General practitioner
GRC	Goondiwindi Regional Council
GRP	gross regional product
GSC	Gwydir Shire Council
GTT	Gateway to Training
Ha	Hectare
IARE	Indigenous Area
IEO	Index of Education and Occupation
IFC	International Finance Corporation
ILOC	Indigenous Location
IRAS	Inland Rail Alignment Study
IRIG	Inland Rail Implementation Group



ABS	Australian Bureau of Statistics
IS	Infrastructure Sustainability
IRSAD	Index of Relative Socio-Economic Advantage and Disadvantage
IEO	Index of Education and Occupation
LALC	Local Aboriginal Land Council
LGA	Local Government Area
LIPP	Local Industry Participation Plan
LOTE	Language Other than English
LUCRA	Land Use Conflict Risk Assessment
m	metre
mm	millimetres
MAAC	Moree Artesian Aquatics Centre
MPSC	Moree Plains Shire Council
MW	megawatt
NENWRP	New England North West Regional Plan
NSW	New South Wales
NS2B	North Star to Border
NNTT	National Native Title Tribunal
NT	Native Title
OEH	Office of Environment and Heritage
OEMP	Outline Environmental Management Plan
P&C	Parents and Citizens Association
PHA	Population Health Areas
PHIDU	Population Health Information Data Unit
PHN	Primary Health Network
PM	Particulate Matter
QAS	Queensland Ambulance Service
QFRS	Queensland Fire and Rescue Service
QLD	Queensland
QPS	Queensland Police Service
RDA	Regional Development Australia
RD Plan	Regional development Plan
RDANI	Regional Development Australia Northern Inland
RFB	Rural Fire Brigade
RFS	Rural Fire Service
RMS	Roads and Maritime Services
RSIS	Regional Skills Investment Scheme
SA	Statistical Area
SIA	Social Impact Assessment
SILO	Schools Industry Links Outreach
SIMP	Social Impact Management Plan

ABS	Australian Bureau of Statistics
SSC	State Suburb (Code)
STEM	Science Technology Engineering and Mathematics
TAFE	Technical and Further Education
TMP	Traffic Management Plan
TSR	Travelling Stock Reserves
UCL	Urban Centre/Locality
VET	Vocational Education and Training

# Summary

## Introduction

Australian Rail Track Corporation (ARTC) is seeking approval from the New South Wales (NSW) and Commonwealth Governments for the development of the North Star to NSW/Queensland (QLD) Border Project (the proposal), which is one of Inland Rail's 13 sections.

The proposal is a new rail corridor approximately 30 kilometres (km) in length, completing one of Inland Rail's key missing links. The proposal includes construction and operation of the rail corridor, a crossing loop with associated maintenance siding, road and rail crossings, bridges culverts and associated infrastructure.

This Social Impact Assessment (SIA) has been prepared for ARTC for the proposal. The purpose of the SIA is to identify and assess how the proposal may affect stakeholders and communities, and to describe what ARTC will do to mitigate negative social impacts and enhance the proposal's benefits.

## Areas of social influence

The following terms are used in this report to describe the proposal's area of social influence:

- 'Study area' which refers to the:
  - Rail corridor and associated crossing loop, maintenance siding, road crossings, bridges, culverts and infrastructure
  - Temporary construction footprint, including laydown areas, access tracks, work areas and a construction accommodation camp
- 'Nearby communities' which refers to North Star, Boggabilla, Toomelah and Goondiwindi
- 'Proposal region' which refers to the Gwydir, Moree Plains and Goondiwindi Local Government Areas (LGAs).

## Social baseline

### Settlement pattern

Most of the land near the proposal is freehold, including large farming and agribusinesses producing cotton, wheat, irrigated crops and cattle. There are no dwellings located in the study area, however the proposal traverses two Statistical Area 1s (SA1) which have a collective population of 517 people and 289 dwellings. The population within the two SA1s traversed by the study area had higher Socio-Economic Indexes for Areas (SEIFA) Index of Relative Advantage and Disadvantage scores than the NSW standardised score in 2016, meaning that, overall, Census data indicate there is less potential for social disadvantage in this area. However, the extended drought may have had a negative effect on households' financial resources in the study area during the years since the Census, which may have increased the potential for disadvantage.

The village of North Star is located approximately 1.5 km south of the proposal. The village has a population of approximately 50 people, and the North Star State Suburb (SSC) which includes the village and surrounding properties had a population of approximately 230 people in 2016.

Boggabilla is a small town (with a population of 551 people) located approximately 8.5 km west of the proposal, surrounded by rural land uses and bounded by the McIntyre River. The Boggabilla SSC includes Boggabilla town, Toomelah and households on surrounding properties, with a total population of approximately 990 people.

Toomelah, an Aboriginal community, is located approximately 2 km east of the most northerly part of the proposal, adjacent to the Macintyre River. At the 2016 census, more than 98 per cent of Toomelah's estimated 202 residents (and 56 per cent of residents in Boggabilla SSC) were Aboriginal people with generally low social and financial resources. Consultation with the Toomelah Boggabilla LALC indicates that Toomelah's population could be higher, at up to 300 people at times. The level of disadvantage in Toomelah as indicated by SEIFA scores, unemployment and median incomes indicates specific vulnerabilities to proposal-related risks, and the opportunity to work with local communities to achieve sustainable changes in their socio-economic circumstances.

Goondiwindi, the municipal centre of the Goondiwindi LGA, is approximately 17 km northwest of the study area, but is the principal service centre for nearby communities, and has also been considered in the SIA.

The proposal region includes the Gwydir, Moree Plains and Goondiwindi LGAs. Gwydir LGA had a small and dispersed population at 5,258 people in 2016. Moree Plains LGA's population was larger at 13,159 people, and the Goondiwindi LGA was home to around 10,630 people.

The Gomeroi People are the traditional custodians of the Country in which the proposal is located.

### **Demographic and housing characteristics**

Demographic characteristics of note include:

- The proposal region is generally characterised by an ageing population. For example, almost one quarter of Gwydir LGA's population was aged over 65 years in 2016 (24.6 per cent). In contrast, more than 50 per cent of the Toomelah population were 24 years or younger
- SEIFA Index of Relative Advantage and Disadvantage (IRSAD) scores for the three LGAs rank within the bottom 50 percentile of Australia which indicates that communities in the proposal region have a higher potential of socio-economic disadvantage compared to other LGAs
- The percentage of people who had completed Year 12 or its equivalent was lower than the State averages in all areas within the proposal region, and particularly low in the Boggabilla SSC and Toomelah
- Gwydir LGA had lower median weekly incomes (personal and household) than the other LGAs, whilst Goondiwindi and Moree Plains had median personal incomes similar to the NSW median, however weekly household incomes were lower than the NSW median
- Vehicle ownership across the proposal region is statistically similar to that of NSW, however percentages of households with no vehicle were high in Boggabilla and very high in Toomelah.

As is typical of rural areas, most occupied private dwellings within the proposal region are separate houses. There is a higher than State average proportion of private dwellings being rented across the proposal region, and a very limited number of housing rentals available. Housing in the community of Toomelah is entirely comprised of community-owned rentals. As such, local housing is unlikely to be available to the proposal's workforce.

## Community values

Land holdings and communities near the study area are characterised by:

- Very low population density, enabling privacy and enjoyment of homes and open spaces
- Rural land uses (e.g. farming, grazing and agribusiness)
- Access to basic local facilities which support community interaction and healthy lifestyles
- Connections and mutual reliance between neighbours
- The rural landscape, characterised by hills, plains, vegetation and vistas across rural land.

Local communities' identity is generally founded on direct connections to land and the landscape, and in the strong self-help networks that have developed due to isolation. A strong sense of pride in the region's productivity and contributions to regional product are also part of local identity.

## Employment

Agriculture, forestry and fishing is the primary industry of employment across the proposal region, accounting for more than 45 per cent of Gwydir LGA's workforce, 28 per cent of the Goondiwindi LGA's workforce and 25 per cent of Moree Plains workforce.

The unemployment rate in Gwydir LGA has remained slightly above the NSW average over the past five years, but unemployment has been consistently and considerably higher in the Moree Plains LGA.

## Stakeholder engagement

Stakeholder engagement is central to the SIA process. The SIA engagement process was integrated with ARTC's engagement process for the EIS and included SIA-specific engagement activities to ensure that inputs from directly affected stakeholders and other community members informed the social baseline, impact assessment and mitigation development. Key issues raised in stakeholder engagement which are considered in the SIA included:

- Personnel and property rights:
  - Impacts of property severance on agricultural properties, farm infrastructure and movement of stock and machinery
  - Impacts on amenity due to noise or dust, or visual amenity impacts
  - Potential for decrease in land values
  - Community concern regarding the proposal's potential to impact on access to water
- Surroundings, community and culture:
  - Potential for noise impacts on Toomelah and North Star residents
  - Potential for impacts on local attachment to the cultural, recreation and environmental values of the Macintyre River and banks
  - Potential for effects on the Aboriginal community's feelings of connection with the landscape
  - The construction workforce accommodation camp would be a boost for the North Star Sporting Club but may change North Star's character
  - Potential for noise and vibration impacts on North Star school learning environment
  - Concern about further isolation of the Toomelah community

- Health and safety:
  - Concern regarding the alignment's potential effects on flooding risks in Toomelah and Goondiwindi
  - Concern for community safety in relation to roadworks and level crossings
  - Impacts on wait times for emergency services and other vehicles at level crossings
  - Concern that children, young people or people seeking suicide will access the rail corridor and be harmed
  - Potential for dust to affect the health of older people and asthmatics
  - Impacts on the character and amenity of areas near the Macintyre River Viaduct, with potential to affect feelings of connections to place
  - Concerns that the behaviour of construction personnel based at the accommodation camp in North Star will impact on community safety
- Access to services and infrastructure:
  - Limited access to health and emergency services which may be strained by construction workforce requirements
  - Impacts to North Star community safety associated with school access to North Star Road
  - Opportunity for joint training exercises for road/rail incidents for police, ambulance and fire services
  - Potential for rail noise to impact on Toomelah and North Star schools
  - Concern that construction personnel's use of the North Star area's limited telecommunications infrastructure will exceed its capacity and limit local access
- Housing and accommodation:
  - Concern about the proximity of the proposed camp to North Star Primary School
  - Disturbance to the amenity and use of the Sporting Club's facilities for community events
  - Increased demand for water, waste management, energy, emergency services, and road capacity
- Employment and business:
  - Opportunity to diversify the proposal region's employment base
  - Potential employment opportunities during construction for the local indigenous population
  - Business opportunities identified by stakeholders included fencing, earthworks, construction material supply, water supply, and borrow pit material
  - Opportunity for local businesses to service construction workforce accommodation camp.

## **Social impacts – construction**

Potential social impacts during construction are summarised below.

### **Surroundings**

Construction within the study area may have the following impacts on the surroundings:

- Impacts on the amenity of people living near the study area, through noise, changes to visual amenity or traffic impacts
- Reduced connectivity across the rail corridor, resulting in changes to movement patterns
- Construction of crossings and road realignments on private land with potential to disrupt on-farm connectivity and farming operations
- Access to creeks and the Macintyre River will be disrupted in areas where bridges and the Macintyre River viaduct would be constructed, which may affect sense of place
- Construction of bridges and level crossings on public roads will require detours and cause traffic delays.

### **Personal and property rights**

Acquisition of property to accommodate the proposal will result in impacts including:

- Property severance, with potential to isolate infrastructure, reduce stock access across the study area, or affect water, drainage or irrigation infrastructure
- Removal/relocation of property infrastructure, causing disruption to farm management
- Anxiety about potential impacts on flooding patterns
- Concern that the proposal's alignment or operation could affect property values
- The proposal intersects seven land parcels which may be subject to Native Title, which could affect Traditional Owners' access to these parcels.

### **Community and culture**

Potential impacts on community and cultural values include:

- Disruption of social use of the Macintyre River and its banks for fishing and enjoyment of the environment during the construction of a viaduct over the river
- Effects on community cohesion which may include severance between properties, disruption to movements across the rail corridor, and community conflict regarding the proposal
- Effects on the Aboriginal community's feelings of connection with the landscape near the proposal due to disturbance to land and vegetation and disruption to access to local sites near the Macintyre River that are commonly used by the community
- North Star is likely to be the location of the construction accommodation camp and large laydown areas. Accompanied by an increase in traffic and a temporary population influx of up to 350 personnel staying in the workforce accommodation camp, this is likely to change the town's rural character and residents' sense of place. This would be temporary but with potential cumulative impacts from the Narrabri to North Star proposal.

ARTC will consult the Toomelah and North Star communities about initiatives to offset changes in local character during the construction period and will ensure residents' views about the future use and appearance of sites used by the proposal are identified and considered in rehabilitating these sites. In particular, the potential for proposal facilities or infrastructure to remain in North Star to create a positive legacy will be explored with the North Star community.

## **Employment**

The proposal would provide a small number of jobs during the pre-construction phase in late 2020 to early 2021. A peak of up to 350 jobs would be available over the 4-year construction period (2021 to 2025).

A proportion of the construction workforce would be drawn from local communities in the Moree Plains, Goondiwindi and Gwydir LGAs. The opportunity for employment in proposal construction would be a significant benefit for both experienced and inexperienced personnel. Economic impact assessment for the proposal indicates that an estimated 100 indirect jobs could also be created in the proposal region.

In also drawing from a large labour pool in the North West New England (NWNE) region and beyond, the proposal is unlikely to have significant difficulties accessing adequate labour for construction or operation. There may however be shortages in specific trades, and cumulative demands for construction labour from adjoining Inland Rail projects and other major projects are likely.

At the regional level, if multiple projects are constructed in the same time frame, there may be a significant draw on trades and construction labour in the proposal region.

## **Business and industry**

Impacts on businesses and industries during construction could include:

- Severance of farm land, which may impact on productivity, and/or the availability of employment on farms
- Potential for road works to cause temporary disruption in access to agricultural markets during construction, however longer term, impacts on travel times are expected to be minimal
- A temporary change in the amenity and character of North Star which may affect its attractiveness as a tourism destination, however this is expected to be temporary.

## **Housing and accommodation**

An accommodation camp will be required to house non-local construction workers. The proposed site adjoins the North Star Sporting Club. Potential impacts include:

- Concern about the proximity of the proposed camp and laydown area to North Star Primary School, particularly in terms of traffic safety or students' safety
- Demands on emergency services
- Disturbance to the amenity and use of the Sporting Club's facilities for community events
- Increased demand for water, waste management, energy, emergency services, and road capacity.

## **Access to services and infrastructure**

Potential impacts in relation to services and infrastructure include:

- The potential for noise, dust or concerns about children's safety to affect the North Star Primary School's learning environment



- Disruption to access along Tucka Tucka Road during construction, which may intermittently delay travel to health and community services
- Increased demand for emergency services
- Requirement for camp and proposal access to waste management infrastructure
- Potential for an increase in demand for support services to assist people to cope with environmental changes
- Potential for construction personnel's use of the North Star area's telecommunications infrastructure to exceed capacity and limit local access
- Emergency vehicle services may be periodically delayed at the construction sites for the grade-separated crossings of Bruxner Way and Tucka Tucka Road and at level crossings.

There are no major structures along the proposal's corridor requiring removal. Of the 17 utilities located within the rail corridor (nine overhead powerlines, seven buried telecommunication cables and one water), 14 are proposed to be relocated, one is proposed to have utility protection, and two are deemed unaffected.

Waste services in North Star are limited to a transfer station and fortnightly kerbside collection which may not be sufficient with the increase in population generated by the construction accommodation camp. Gwydir Shire Council (GSC) also identified limited septic treatment infrastructure in North Star.

### **Health and wellbeing**

Uncertainty and fears about the impacts of construction and operation are likely to cause stress and contribute to anxiety, particularly for affected landholders and people living nearest the rail line. Stress and anxiety have potential to affect mental health. In Toomelah, concerns about changes to the environment and the landscape near Toomelah and the Macintyre River are causing anxiety for some residents, with concern that connections to the landscape will be lost for current and future generations.

ARTC has initiated a partnership which provides access to mental health services, initially via a telephone service.

Employment opportunities during construction are likely to support the wellbeing of proposal personnel and their families, and business opportunities are also likely to support business development and associated community benefits such as indirect employment during the construction period.

The North Star community may experience a variety of impacts relating to the location of the laydown area and accommodation camp in their town, and as a result of cumulative impacts from the proposal and Narrabri to North Star. Peak times for construction personnel movements are unlikely to coincide with those of school students, however there may be concerns about the safety of children and older pedestrians. Collectively, the laydown areas, camp, increased traffic, noise and population influx represent the potential for stress on the town of North Star.

Sequential construction of Narrabri to North Star and the proposal would result in up to four years' construction activity in the North Star area, with increased heavy traffic, large numbers of non-local workers and impacts on visual amenity. This is likely to affect the town's character and to fatigue local residents. Consultation with the North Star community will identify initiatives which will assist them to cope with the changes and realise a long-term community benefit from the proposal.

## **Social impacts – operations**

Potential impacts during operations are summarised below.

### **Surroundings**

Potential impacts include:

- Property severance and loss of connectivity between properties
- Noise from the proposal's operation may be audible to residents living near the proposal and be experienced as intrusive on the quiet rural character
- Rail noise levels may trigger the need for mitigation for up to three properties
- The natural character of the Macintyre River would be affected near the rail bridge
- Travel delays would be experienced at level crossings, with delays estimated at approximately two minutes for trains of 1,800 m.

Consolidation of rail crossings will reduce connectivity within and between properties, however the proposal provides the opportunity to upgrade and replace existing level crossings along the existing rail corridor.

### **Community**

Changes to the landscape near Toomelah, including the bridge over the Macintyre River and prohibition of access to land within the study area, have potential to affect local sense of identity and belonging to place. The Macintyre River Viaduct will be an imposing structure located between Toomelah and Bruxner Way, which may increase feelings of physical and social isolation in Toomelah.

The Toomelah community's access to remnant forest areas along the existing non-operational rail alignment for native vegetation and cultural education will be permanently disrupted. ARTC will obtain offsets for the loss of vegetation (as per EIS Chapter 11: Biodiversity) and support community initiatives which seek to mitigate the loss of access and cultural use. Ongoing cooperation with and support for the Toomelah community will be required to support their adaptation to environmental changes.

Changes in the use of land within the study area (from farming or grazing to transport infrastructure) may affect the immediate landscape's contribution to rural identity, however the rail line has existed between North Star and Boggabilla for decades, and broader changes in landscape values which would affect rural identity are not expected.

### **Employment**

A workforce of approximately 15 to 20 personnel would be required for the proposal's operation. A portion of these jobs could be filled from within the proposal region, but employment benefits would extend to other regions, as personnel such as track maintenance crews may also work on adjacent Inland Rail sections.

The proposal is also likely to stimulate indirect employment growth through related investments in infrastructure, freight terminals and related businesses, and through associated regional development opportunities.

Decommissioning would result in temporary employment opportunities, followed by a loss of jobs after decommissioning is complete.

## **Business and industry**

The combined effects of disruption to fences or water access and severance of productive land may change the use of some agricultural properties.

There may be some diminishment of tourists' experience of the rural landscape where the proposal is parallel to Bruxner Way, however this is not expected to have a significant impact on tourism visitation.

During operations, there may be a decrease in long haul road freight volumes over time, affecting levels of trade for local transport businesses

## **Access to services and infrastructure**

There are likely to be limitations in police and emergency services' capacity to respond to any road/rail accidents, derailments, or other major incidents, which may place strain on services unless increased Government funding is allocated.

During operations, response times for emergency services may be delayed if encountering passing trains at level crossings. The worst-case scenario would be a delay of approximately two minutes however in an emergency, such a delay can have serious consequences. ARTC will work with emergency services to develop protocols and joint working arrangements to address potential impacts on emergency services and service response times during construction and operation.

## **Health and wellbeing**

The rail line would be elevated from Chainage (Ch) 29.4 km, which is approximately 2.7 km from Toomelah. However, the potential exists for people to access the rail corridor where it is at grade, increasing the opportunity for suicide and/or risk-taking behaviours. Mitigations will include fencing to the rail corridor and community and economic development strategies developed in consultation with the Toomelah community. Impacts on natural resources and local landscapes should be considered as part of proposal-related changes which may affect the Toomelah community's wellbeing. Toomelah community members also have concerns about the effects of rail noise on children and young people who are on the autism spectrum.

Safety risks associated with the proposal's operation include derailments, level crossing accidents, and railway-based suicide. ARTC will apply best practice design and management measures to mitigate community safety impacts and is developing safety programs which will be tailored for local communities.

Stakeholders raised concerns regarding the potential for diesel emissions or coal dust from trains to affect the health of people near the proposal. The proposal will not accommodate coal trains. Appendix L: Air quality provides an assessment of potential air quality impacts, which has been considered in the SIA.

The potential to exacerbate flooding has also been raised as a concern by landowners, Goondiwindi Regional Council (GRC) and Toomelah residents. The proposal's potential effects on flooding patterns are addressed in Appendix H: Hydrology and flooding.

## **Social benefits and opportunities**

The proposal's potential social benefits and opportunities are as follows.

### **Construction**

The proposal represents a positive contribution to the regional community by providing employment opportunities for up to 350 construction personnel and approximately 15 to 20 operations personnel. Participation in proposal employment will support the wellbeing of proposal personnel by offering a period of financial security and opportunities for training and development.

Local and regional businesses would also benefit. Opportunities to supply the proposal may include supply of fuels, equipment, borrow and quarried material, and services including fencing, electrical installation, rehabilitation, landscaping, maintenance and trades services. Transport or logistics businesses located in Goondiwindi may also have significant opportunities to service the construction phase.

The proposal's local supply arrangements will be experienced as an opportunity to develop and grow local businesses, with some benefits possible in nearby communities, but with broader regional benefits of greater significance.

The expansion in construction activity would support additional flow-on demand and additional spending by the construction workforce, and potentially increase business trading levels in the proposal region.

ARTC's investments in local communities will focus on programs and projects which strengthen local social networks and provide opportunities for people to meet and participate in community activities. This will include a focus on the North Star and Toomelah communities to support their ability to cope with proposal-induced changes.

The proposal has a significant opportunity to improve community wellbeing in Toomelah and potentially Boggabilla. Prior experience demonstrates the potential for sustained employment to alter the social and economic conditions in Toomelah. Construction work will be temporary only, and the operational workforce small, so a customised employment program underpinned by empowerment through community development is needed.

### **Operations**

Benefits of the proposal's operation at the local level could include:

- Potential for local residents to gain employment or for their businesses to supply the proposal
- The accommodation camp could leave a positive legacy for the North Star community if facilities or infrastructure are left in place following construction, benefitting local residents, community event visitors and tourists
- Potential for agricultural producers to access freight rail services to transport their produce to market.

The proposal is part of the Inland Rail Programme which will make a strong contribution to regional, state and national development for up to 100 years.

## **Social impact management**

The proposal's Social Impact Management Plan (SIMP) outlines the objectives, outcomes and performance measures for mitigation of social impacts, and the actions that ARTC will undertake and/or require its contractor to undertake. Measures intended to enhance proposal benefits and opportunities are also provided. Relevant commitments made in the SIMP will be extended to the proposal's contractors.

Action plans are provided for:

- Community and Stakeholder Engagement
- Workforce Management
- Housing and Accommodation
- Health and Community Wellbeing
- Local Business and Industry Content.

Collectively, the five action plans are designed to mitigate the proposal's social impacts on local communities and stakeholders, maximise local employment and business opportunities, and ensure that opportunities associated with the proposal deliver long-term benefits for local communities.

# 1 Introduction

ARTC is seeking approval from the NSW and Commonwealth Governments for the development of the North Star to NSW/QLD Border Project (the proposal), which is one of Inland Rail's 13 sections.

The proposal is a new rail corridor approximately 30 km in length, completing one of Inland Rail's key missing links. The new rail corridor will connect the adjacent Inland Rail projects of Narrabri to North Star (N2NS) and NSW/QLD Border to Gowrie (B2G).

## 1.1 Purpose of the Social Impact Assessment

This SIA has been prepared for ARTC. The purpose of the SIA is to identify how the proposal may affect local and regional communities, and what ARTC will do to mitigate negative social impacts and enhance proposal benefits.

The objectives of the SIA are to:

- Identify potentially affected communities, having regard to all potential social impacts throughout the proposal's life (construction, operation and decommissioning)
- Enable stakeholders and potentially impacted communities to provide inputs to the SIA, including the scope of assessment, how social impacts may affect local values, and how negative impacts can be avoided or mitigated
- Develop a comprehensive baseline of social characteristics against which potential changes can be assessed
- Identify likely social impacts based on stakeholder inputs, the characteristics of local and regional communities and risk assessment
- Provide a detailed assessment of likely social impacts and benefits and evaluate their significance during each stage of the proposal
- Describe the actions ARTC will undertake to avoid or reduce social impacts and enhance social benefits
- Provide a SIMP and monitoring strategy to support adaptive management of social impacts and benefits.

## 1.2 Area of influence

The proposal is in northern NSW between North Star and the NSW/QLD border. The proposed rail corridor follows the existing non-operational rail corridor from approximately 1.5 km north of North Star to the deviation at Whalan Creek (the 'brownfield' section). From this point, the corridor takes a greenfield route across the Macintyre River the centre point of the river being the NSW/QLD border, and connects to the NSW/QLD B2G southern project limit.

The proposed corridor crosses the LGAs of Gwydir Shire and Moree Plains Shire within NSW. For SIA purposes, the Goondiwindi LGA is also relevant for its relationship to local communities near the proposal. The proposal crosses major roads and rivers such as the Bruxner Way, Tucka Tucka Road and the Macintyre River. Approximately 13 km of the proposal runs parallel to the Bruxner Way between the intersection of North Star Road and Tucka Tucka Road.

The land requirement for the proposal would comprise the corridor with an average width of 40 m, with some variation to accommodate infrastructure and to cater for local topography. Acquisition of properties would be required in order to construct and operate the proposal.

The corridor would be of sufficient width to accommodate the infrastructure currently proposed for construction, the operation of 1,800 m double stacked contained freight trains, and future expansion, including a possible future requirement for 3,600 m trains.

The proposal's areas of social influence are detailed in Section 4.5 and include the:

- 'Study area' which refers to the:
  - Rail corridor and associated crossing loop, maintenance siding, road crossings, bridges, culverts and associated infrastructure (also described in the EIS as the permanent disturbance footprint)
  - Temporary disturbance footprint for construction, including laydown areas, work areas and a construction accommodation camp
- 'Nearby communities' which refers to North Star, Boggabilla, Toomelah and Goondiwindi
- 'Proposal region' which refers to the Gwydir, Moree Plains and Goondiwindi LGAs.

## 2 Legislation, policy and guidelines

The proposal requires approval from the NSW Minister for Planning under Part 5.1 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act). ARTC lodged its North Star to Border State Significant Infrastructure Project Application with the NSW Government on 21 May 2018 and the Secretary's Environmental Assessment Requirements (SEARs) were issued on 8 August 2018.

### 2.1 Environmental Planning and Assessment Act

As described in the EP&A Act (Section 1.3), the NSW Government aims 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'.

The SIA provides information which will assist in integrating social considerations in decision-making about environmental planning and assessment for the proposal.

#### 2.1.1 Secretary's Environmental Assessment Requirements

The SEARs include specific assessment requirements in relation to socio-economic, land use and property impacts which are addressed within the SIA and/or in other EIS chapters and appendices, as shown in Table 1.

**Table 1 Secretary's Environmental Assessment Requirements – socio-economic, land use and property impacts**

Requirements	
<b>Desired performance outcomes</b>	<p>The proposal minimises adverse social and economic impacts and capitalises on opportunities potentially available to affected communities.</p> <p>The project minimises impacts to property and business and achieves appropriate integration with adjoining land uses, including maintenance of appropriate access to properties and community facilities, and minimisation of displacement of existing land use activities, dwellings and infrastructure.</p>



Requirements	
Specific assessment requirements	EIS Section
1. The Proponent must assess social and economic impacts in accordance with the current guidelines.	SIA - Table 2 EIS - Appendix I: Economic impact assessment
2. The Proponent must assess agricultural land use including: <ul style="list-style-type: none"> <li>a) current and potential Important Agricultural Land within the project and surrounding locality, including land capability and agricultural productivity;</li> <li>b) division or fragmentation of property and changes to property management which could lead to the loss of viability</li> <li>c) property access and the efficient and safe crossing of the rail corridor by machinery and livestock</li> <li>d) connectivity of property infrastructure severed by the rail corridor; and</li> <li>e) livestock exclusion/management to minimise harm and losses.</li> </ul>	SIA - Sections 7.2.1 and 7.2.3  EIS Chapter 22: Land use and property
3. The Proponent must undertake an assessment of biosecurity risks and management measures relating to the potential for spread of pests, diseases or weeds along the length of the project alignment, in accordance with the 'general biosecurity duty' under the <i>Biosecurity Act 2015</i> .	EIS Chapter 11: Biodiversity and Appendix B: Biodiversity technical report
4. The Proponent must assess the social and economic impact of temporary accommodation for construction workers (construction camps) on communities near the project site.	SIA - Sections 7.5.1
5. 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).	SIA - Sections 7.1 – 7.9, Section 9
6. Where the project may impact on significant mineral resources, the Proponent must assess the impact of the Project on these resources including <ul style="list-style-type: none"> <li>a) any operating mines, extractive industries or known mineral or petroleum resources;</li> <li>b) exploration activities in the vicinity of the proposed development; and</li> <li>c) access for future exploration in the area.</li> </ul>	EIS Chapter 22: Land use and property
7. The Proponent must identify encroachments into adjoining road reserves, travelling stock routes and Crown land and roads affected by the Project.	SIA - Section 7.1.3 EIS Chapter 22: Land use and property
<p>Current guidelines:</p> <ul style="list-style-type: none"> <li>■ Environmental Planning and Impact Assessment Practice Note: Socio-economic Assessment (RMS, 2013)</li> <li>■ Social Impact Assessment Guideline for State significant mining, petroleum production and extractive industry development (Department of Planning and Environment [DPE] 2017)</li> <li>■ Social Impact Assessment Scoping Tool (DPE, 2017)</li> <li>■ Infrastructure proposals on Rural Land Primefact 1063, second edition (DPI, 2013)</li> <li>■ Land Use Conflict Risk Assessment (LUCRA) Guide (DPI, 2011)</li> <li>■ New England North West Regional Plan 2036 (DPE, 2017).</li> </ul>	

## 2.2 Guidelines

The NSW Department of Planning and Infrastructure's Social Impact Assessment Guideline 2017 (SIA Guideline) was published in September 2017 and is a non-statutory guideline that provides direction on assessing the impacts of State Significant Resource Industry projects under the EP&A Act. The guideline's principles are relevant to transport infrastructure projects and are summarised in Table 2 along with the NS2B SIA's response and the applicable SIA sections.

The SIA has considered the SIA guideline's typology for social impacts and its criteria for assessing material impacts, and been conducted in accordance with the SIA Guideline and the SEARs, including:

- Scoping and preliminary risk assessment at an early stage of the SIA (refer Section 4.4), referring to the Social Impact Assessment Scoping Tool (DPE, 2017)
- An inclusive stakeholder engagement process (refer Section 6)
- Ensuring suitable indicators are chosen and developed in relation to pre-existing conditions (refer Section 5)
- Cooperation with other EIS disciplines to ensure integration of results with a bearing on the social environment (refer Section 7.1.2, Section 7.2.5, Section 7.3.2 and Section 7.7.4)
- Detailing proposed social impact management initiatives (refer Section 8).
- Analysis and assessment of likely impacts and benefits, including direct, indirect and cumulative impacts for all stages of the proposal, including differentiation for different stakeholder groups (refer Section 7 and Section 9)
- Development of adaptive management and monitoring strategies (refer Section 9).

**Table 2 Social Impact Assessment Guideline principles**

Principles	Description	SIA Response	Section
<b>Action-oriented</b>	Delivers outcomes that are practical, achievable and effective.	The SIMP includes a wide range of measures which are practical and achievable and includes a monitoring framework to track the effectiveness of measures.	8.1 – 8.7
<b>Adaptive</b>	Establishes systems to actively respond to new circumstances/information and support continuous improvement.	The SIA provides a stakeholder engagement strategy which will enable stakeholder participation in implementation and monitoring of mitigation measures. SIMP review provisions will enable amendment of management measures if monitoring data indicate that this is required.	8.2, 8.7
<b>Distributive equity</b>	Considers how social impacts are distributed across vulnerable groups and between current and future generations.	The SIA considers the distribution of social impacts for landowners, nearby communities and the proposal region. Impacts on vulnerable community members, specifically Aboriginal community members, are identified. The assessment considers the distribution of impacts over time.	7.1 – 7.9, 10

Principles	Description	SIA Response	Section
<b>Life cycle focus</b>	Seeks to understand potential impacts (including cumulative impacts) at all Project stages, from pre-construction to post closure.	The SIA includes a focus on pre-construction, construction, operations and decommissioning, and includes assessment of cumulative impacts.	7.1 – 7.9
<b>Impartial</b>	Is undertaken in a fair, unbiased manner and follows relevant ethical standards.	The SIA has been conducted with a commitment to objective and ethical assessment.	Throughout
<b>Inclusive</b>	Seeks to understand the perspectives of the potentially affected groups, informed by respectful, meaningful, tailored and effective engagement	The SIA incorporates the results of ARTC's stakeholder engagement.  SIA-specific stakeholder engagement was undertaken to develop a detailed understanding of how impacts may be experienced in local communities.	3.4, 6.1
<b>Integrated</b>	Uses relevant information and analysis from other assessments and supports effective integration of social, economic and environmental considerations	The SIA incorporates the results of other relevant technical studies undertaken for the EIS	7.1, 7.2, 7.5
<b>Material</b>	Identifies which potential social impacts matter the most, and/or pose the greatest risk to those affected.	The SIA scoping processes considered the likelihood, scale, severity and sensitivity of potential impacts. Social risks were evaluated using a social risk matrix.	4.4, 9
<b>Precautionary</b>	If there is a threat of serious or irreversible damage to the environment, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental (including social) degradation.	The SIA considers residual social risks. All practical and achievable mitigations that were identified have been included in the SIA.	10
<b>Proportionate</b>	Scope and scale of I should correspond to the potential social impacts.	Preliminary assessment of potential material impacts was undertaken as part of the scoping stage.	4.4.5
<b>Rigorous</b>	Uses appropriate, accepted social science methods and robust evidence from authoritative sources.	Methods, evidence sources, data quality and uncertainties are described and justified.	3.1 – 3.6
<b>Transparent</b>	Information, methods and assumptions are explained, justified and accessible, and people can see how their input has been considered.	Stakeholder engagement inputs are documented and reflected throughout Sections 7 and 8.	7.1 – 7.7, 8.1 – 8.6.

### 2.2.1 RMS Environmental Planning and Impact Assessment Practice Note: Socio-economic Assessment

Roads and Maritime Services' (RMS) socio-economic practice note forms part of the common procedures under the RMS EIA guidelines. This practice note provides a framework for assessing socio-economic impacts of road and maritime projects undertaken by or on behalf of RMS to ensure impact assessments are carried out consistently to a high standard, and are properly integrated with other environmental assessments, design development and management processes (RMS, 2013).

A 'comprehensive' assessment as defined by RMS's socio-economic practice note has been undertaken.

### **2.2.2 Primefact 1063**

The purpose of NSW DPI's Primefact 1063 (NSW DPI, 2013) is to 'help consent authorities to maintain sustainable primary production and development opportunities and minimise land use conflict when assessing infrastructure proposals affecting rural resource lands. Infrastructure impacts noted as of particular significance for sustainable agriculture include resource loss and fragmentation, impacts on farming operations and livestock, increased weed, biosecurity and bushfire risks, and site rehabilitation.

DPI recommends that infrastructure development proposals address the following to minimise impacts on agricultural resources and enterprises:

- Proposals are clearly justified in a regional context and identify the merits and community benefit of the proposal (refer Section 7)
- Agricultural resource lands are identified and avoided, new infrastructure is located within existing infrastructure corridors wherever possible and land use conflicts are minimised (refer EIS Chapter 21: Landscape character and amenity)
- Landowners are effectively consulted during planning, construction and rehabilitation works and the expectations of local communities are managed (refer Section 6)
- Development proposals identify suitable mitigatory/remediation responses for all likely agricultural impacts (refer Section 8 and EIS Chapter 22: Land use and property).

### **2.2.3 Land Use Conflict Risk Assessment**

The Land Use Conflict Risk Assessment (LUCRA) Guide provides guidance on assessing land use conflicts, which it notes occur 'when one land user is perceived to infringe upon the rights, values or amenity of another', with rural amenity issues the most common land use conflict issue. The Guide describes rural amenity issues as including impacts to air quality due to agricultural and rural industry, use and enjoyment of neighbouring land and visual amenity.

The LUCRA process includes gathering information about proposed land use change and associated activities, evaluating the risk level of each activity, and identifying risk reduction management strategies. This general approach has been followed as part of the SIA's assessment of conflicts between the proposal and other land uses (DPI Resource Planning and Development Unit, 2011).

## **2.3 Regional and Council plans**

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

The study area is covered by the New England North West Regional Plan 2036 (NENWRP). The NENWRP provides a 20-year blueprint for the future. The NSW Government's vision for the New England North West Region is 'Nationally valued landscapes and strong, successful communities from the Great Dividing Range to the rich black soils'. The NENWRP recognises the importance of the region to NSW in terms of its contribution to food production through intensive agriculture, grazing, food processing and broadacre cropping.

Regional planning objectives are summarised in Table 3.

**Table 3 Regional planning context for Social Impact Assessment**

Plan	Priorities/actions for Gwydir Shire	Priorities for Moree Plains Shire	Proposal's support for objectives
<b>New England North West Regional Plan 2036</b>	<ul style="list-style-type: none"> <li>■ Deliver a variety of housing options in Bingara and Warialda and promote development that contributes to the unique character of Gravesend, Cobbadah, Upper Horton, Croppa Creek, North Star, and Warialda Rail</li> <li>■ Continue to develop access and logistics infrastructure on appropriate sites to encourage new industry opportunities</li> <li>■ Support the development of employment lands</li> <li>■ Expand nature-based, adventure and cultural tourism places and enhance visitor experiences</li> <li>■ Encourage diversification in agriculture, horticulture and agribusiness to grow these sectors and harness domestic and international opportunities.</li> </ul>	<ul style="list-style-type: none"> <li>■ Deliver a variety of housing options in Moree and promote development that contributes to the unique character of identified communities (which include Boggabilla)</li> <li>■ Encourage diversification in agriculture, horticulture and agribusiness to grow these sectors and harness domestic and international opportunities</li> <li>■ Continue to develop access and logistics infrastructure on appropriate sites to encourage new industry opportunities</li> <li>■ Support Moree as a 'Smart City' to reduce costs and enhance services for agribusiness and dependent business suppliers</li> <li>■ Expand nature-based adventure and cultural tourism places and enhance visitor experiences</li> <li>■ Promote a vibrant, youthful and mobile workforce and provide services for the ageing population</li> <li>■ Identify and promote wind, solar and other renewable energy production opportunities.</li> </ul>	<ul style="list-style-type: none"> <li>■ Use of brownfield corridor avoids impacts on urban settlements</li> <li>■ Provision of workforce accommodation camp minimises potential for impacts on housing access</li> <li>■ Potential for use of Proposal to facilitate freight movements to and from new logistics, agriculture, horticulture and agribusiness opportunities, with potential to support the development of employment lands</li> <li>■ Avoidance of impacts on nature-based adventure and cultural tourism places</li> <li>■ Proposal's provision of training and employment opportunities will support labour force skills development and participation</li> </ul>
<b>RDA Northern Inland Regional Plan 2016-2019</b>	<ul style="list-style-type: none"> <li>■ Regional community regeneration and sustainable population growth</li> <li>■ Industry diversification, job creation, capacity building and resource efficiency</li> <li>■ The priority infrastructure projects of many of the 12 LGAs relate to local road upgrades. Additionally, skills shortages and disengaged youth need to be addressed.</li> </ul>		<ul style="list-style-type: none"> <li>■ Provision of training and employment opportunities that could support the retention of local residents and</li> </ul>

Plan	Priorities/actions for Gwydir Shire	Priorities for Moree Plains Shire	Proposal's support for objectives
			<p>address skills shortages</p> <ul style="list-style-type: none"> <li>■ Potential for use of Proposal to facilitate freight movements to and from new industry developments development</li> </ul>
<b>Strategic Regional Land Use Plan New England North West Development Australia (RDA)</b>	<ul style="list-style-type: none"> <li>■ Balancing agriculture and resource development</li> <li>■ Infrastructure, including delivery of a fully costed infrastructure plan for the region</li> <li>■ Economic development and employment, including preparation of Regional Workforce Plans</li> <li>■ Housing and settlement, including working with the housing and development industry to delivering more housing and a more diverse range of housing types</li> <li>■ Community health and amenity include the establishment of an air quality monitoring network, development of a cumulative impact assessment methodology for mining and coal seam gas development</li> <li>■ Natural environment including completion of a database of biodiversity offsets</li> <li>■ Natural hazards and climate change, including working with local councils and industry to avoid flood and bushfire prone development and to encourage low emission energy development.</li> </ul>		<ul style="list-style-type: none"> <li>■ Use of brownfield corridor and alignment of Proposal with cadastral boundaries has minimised impacts on agricultural land, and avoided impacts on urban settlements</li> <li>■ Provision of a key rail link to support regional economic development</li> </ul>
<b>New England North West Regional Transport Plan 2013</b>	<ul style="list-style-type: none"> <li>■ Provision of additional overtaking lanes on the Newell Highway to improve overtaking opportunities and safety</li> <li>■ Completion of heavy-duty pavement construction on the Newell Highway between Narrabri and the Queensland border</li> <li>■ Provision of additional rest areas and upgrades to rest areas on the Newell Highway and the New England Highway</li> <li>■ Road upgrade works for the New England, Newell and Oxley highway</li> <li>■ Enhancing the public transport system.</li> </ul>		<ul style="list-style-type: none"> <li>■ No interface with Newell Highway upgrades or disruption to existing public transport routes</li> </ul>

### 2.3.2 Council plans

The Moree Plains 2035 Community Strategic Plan and Gwydir Shire Community Strategic Plan 2017-2027 describe the proposal region communities' long-term aspirations and directions for their shires and identify the outcomes and long-term strategic responses needed to achieve the agreed directions.

The Gwydir Local Environmental Plan 2013 and the Moree Plains Local Environmental Plan 2011 guide planning decisions for the LGAs through zoning and development controls, which provide a framework for the way land can be used.

The Goondiwindi Community Plan 2012-2022 describes a shared vision for the Goondiwindi community's future and economic growth, identifies key themes and areas for action, and provides information for planning and service delivery. The Goondiwindi Region Planning Scheme sets out the controls and use of land that apply to land in the region. Priorities identified in the Community Plans, Local Environmental Plans and planning scheme are summarised in Table 4.

**Table 4 Local planning context**

Community Plan priorities	LEP/Planning Scheme priorities
<b>Gwydir Shire</b>	
<ul style="list-style-type: none"> <li>■ A healthy and cohesive community (social)</li> <li>■ Building the business base (economic)</li> <li>■ An environmentally responsible shire (environment)</li> <li>■ Proactive regional and local leadership (civic leadership)</li> <li>■ Organisational management (governance).</li> </ul>	<ul style="list-style-type: none"> <li>■ Encourage the proper management, development and conservation of environmental, economic and social resources in Gwydir</li> <li>■ Facilitate economic growth and development</li> <li>■ Facilitate development in accordance with flood management planning</li> <li>■ Facilitate development that is compatible with adjoining and nearby uses, and appropriate in scale and type to the characteristics of the zone</li> <li>■ Identify, protect and conserve places of European heritage significance and Aboriginal heritage and cultural significance</li> <li>■ Identify, protect, conserve and enhance natural assets.</li> </ul>
<b>Moree Plains Shire</b>	
<ul style="list-style-type: none"> <li>■ An inclusive, caring community</li> <li>■ Sustainable spaces and places</li> <li>■ A vibrant regional economy</li> <li>■ A leading organisation.</li> </ul>	<ul style="list-style-type: none"> <li>■ Encourage the management, development and conservation of environmental, economic and social resources</li> <li>■ Facilitate economic growth and development</li> <li>■ Facilitate development in accordance with flood management planning</li> <li>■ Facilitate development that is compatible with adjoining and nearby uses and appropriate in scale and type to the characteristics of the relevant zone</li> <li>■ Recognise places of European heritage significance and Aboriginal heritage and cultural significance.</li> </ul>



Community Plan priorities	LEP/Planning Scheme priorities
<b>Goondiwindi Region</b>	
<ul style="list-style-type: none"> <li>■ A vibrant, inclusive and healthy community with access to services and facilities reflecting the unique character, role and needs of communities throughout the LGA</li> <li>■ A strong and sustainable regional economy that supports the growth of existing and new industry and business activities that enhance local lifestyle and provide long-term employment</li> <li>■ A sustainable, well managed and healthy environment that provides a balance between development and conservation of the region's resources</li> <li>■ A proactive and ethical community with individuals and organisations providing best practice leadership and management of people, assets and finance.</li> </ul>	<ul style="list-style-type: none"> <li>■ Promote a compact settlement pattern and access to the employment and services provided in towns</li> <li>■ Identify future urban growth opportunities.</li> <li>■ Allocate sufficient land for industry diversification and development in Goondiwindi, Inglewood and Texas</li> <li>■ Recognise and protect natural economic resources such as productive rural land whilst promoting further economic diversification in these areas</li> <li>■ Protect and enhance biodiversity values to support a health ecosystem that underpins the region's liveability and prosperity</li> <li>■ Maintain the character and vibrancy of town centres</li> <li>■ Promote the diversification of housing product to accommodate all age groups and household types and lifestyle choices.</li> </ul>



## 3 Methodology

The key steps in a SIA are to:

- Engage with stakeholders and communities to identify the scope of potential social impacts and benefits, and ensure community views and knowledge are considered in the SIA
- Define the proposal's area of social influence and the scope of assessment
- Develop a social baseline which combines quantitative and qualitative data, to provide a detailed picture of existing conditions in local and regional communities
- Assess the likelihood, nature and distribution of potential social impacts and benefits, and evaluate their significance for stakeholders and social conditions
- Develop management measures which avoid, reduce or offset social impacts, and maximise proposal benefits.

These steps are outlined below.

### 3.1 Stakeholder engagement

The SIA engagement process was integrated with the ARTC's engagement process. This included SIA and EIS team members participating in:

- Community information sessions which enabled residents, property owners, business owners and community, environmental and economic groups to interact one-on-one with EIS specialists
- Meetings with Aboriginal community representatives regarding cultural heritage and social and environmental impacts
- Meetings with the Moree Plains Shire, Goondiwindi Regional and Gwydir Shire Councils to discuss community concerns and impacts on public infrastructure.

SIA-specific engagement was also undertaken to ensure the SIA was informed by inputs from affected and interested stakeholder, as described in Section 6.2 and included:

- A landowner workshop
- Meetings with the Moree Plains Shire, Goondiwindi Regional and Gwydir Shire councils, and with the Toomelah Boggabilla LALC, to review the SIA scope and identify potential impacts, benefits and mitigations
- Meetings, interviews and workshops with service providers including emergency services, education and health service providers
- Attendance at the Boggabilla Community Connect event to meet with community members and service providers and discuss potential impacts on services and communities.
- Using a preliminary draft SIA as the basis of consultation, workshops were held with the Moree Plains Shire Council (MPSC), GSC and GRC and the Toomelah Boggabilla LALC, to discuss the SIA's preliminary findings and the mitigations being proposed.

A profile of key stakeholders and their issues is provided in Section 6.3, and the results of stakeholder engagement have been incorporated throughout the assessment as referenced.

The objectives for SIA engagement are shown in Table 5.

**Table 5 Social Impact Assessment engagement objectives**

Objectives	How achieved
<b>Affected stakeholders' informed inputs are considered in the SIA</b>	<ul style="list-style-type: none"> <li>■ The SIA takes account of the results of ARTC's engagement with directly affected landowners and other stakeholders</li> <li>■ Stakeholders who participate in engagement were provided with information about the nature and location of the proposal, and the range of impacts and opportunities that may result, as the basis for providing their inputs</li> <li>■ The views of Councils and the Toomelah Boggabilla LALC were sought and incorporated.</li> </ul>
<b>SIA engagement is inclusive of all interested stakeholders</b>	<ul style="list-style-type: none"> <li>■ Access to SIA engagement was available and accessible to community members through participation in community drop-in sessions and the range of stakeholder engagement mechanism provided by ARTC</li> <li>■ Targeted engagement was undertaken with representative stakeholder groups (e.g. Councils, Toomelah Boggabilla Local Aboriginal Land Council (LALC) and social infrastructure providers</li> <li>■ The results of ARTC's engagement with traditional custodians, businesses and other key stakeholders were incorporated in the SIA.</li> </ul>
<b>Stakeholders' input informs each stage of the SIA, including the scoping, baseline, impact assessment and SIMP</b>	<ul style="list-style-type: none"> <li>■ Consultation contributed to definition of the SIA scope and baseline</li> <li>■ Consultation enabled stakeholders to provide informed inputs to be incorporated in the impact assessment</li> <li>■ Key stakeholders had the opportunity to comment on the assessment of social impacts and proposed mitigation strategies.</li> </ul>

### 3.2 Scoping

The SIA Guideline defines the purpose of the scoping process as to 'identify elements of the natural or human environment ('matters') that are expected to be impacted upon by activities associated with the proposal, how those impacts should be assessed and to what level of detail' (DP&E, 2017).

The SIA has considered the potentially affected matters provided in the EIS scoping tool and identified those matters that may experience material impacts as a result of the proposal, as described in Section 4.4.

The areas of social influence were defined by considering:

- The scale and nature of the proposal, potential direct impacts, and potential indirect impacts that may extend from the proposal, throughout its lifecycle
- Who may be affected by the proposal, how they may be affected, and their interests, values and aspirations?
- Social characteristics and trends, and sensitivities of local and regional communities
- Stakeholder inputs on the scope of potential social impacts and benefits
- Native Title rights and other interests held by Aboriginal people
- The settlement pattern, including infrastructure, urban/rural centres, and land use patterns
- The location of other projects in the region which may contribute to cumulative social impacts over time.

The SIA scope was defined through:

- Consideration of key matters and social impacts identified in the SIA Guideline
- Consideration of stakeholder inputs

- Evaluating the likelihood of social impacts and benefits in relation to each key matter
- Identifying potential material social impacts
- Identifying links to EIS investigations.

The scoping process also identified the social opportunities or benefits expected to eventuate. The outcomes of the scoping process are reported in Section 4.

### **3.3 Social baseline**

The social baseline provides a detailed description of social conditions in the areas of social influence, including for:

- Properties in or near the study area
- Nearby communities (North Star, Toomelah, Boggabilla and Goondiwindi)
- LGAs (Moree Plains Shire, Gwydir Shire and Goondiwindi Region).

Regional community objectives and the capacity of the region's labour force were also considered for the New England North West region.

Investigations undertaken to develop the social baseline included:

- Analysis of key social indicators within the study area, nearby communities and the proposal region
- Analysis of population size, composition and growth in the nearby communities and LGAs
- Description of the history, land use and settlement patterns in the areas of social influence
- Assessment of housing and accommodation availability
- Description of community values, including community identity, culture and cohesion, based on stakeholder inputs and community planning priorities
- Researching the provision of social infrastructure (community facilities, services and networks)
- Analysis of community health and safety indicators
- Development of a profile of employment, labour force and skills
- Describing the capacity and distribution of businesses and industry in the areas of influence.

### **3.4 Impact assessment**

The impact assessment process commenced with preliminary risk assessment as part of the scoping stage, supported by social baseline findings and engagement outcomes. Impacts were assessed for the pre-construction, construction, operational and decommissioning phases of the proposal.

The SIA includes assessment of potential cumulative impacts in relation to Inland Rail's adjoining sections and other major projects in the proposal region.

Further detail on assessment methods is provided in Table 6.

**Table 6 Social Impact Assessment methods**

Social domains	Assessment method	Data sources	Justification
<b>Surroundings</b>	<ul style="list-style-type: none"> <li>Describe the interactions between the proposal, surrounding land uses and sensitive receptors</li> <li>Identify any effects on the social use of land</li> <li>Identify natural, built or cultural features which may be impacted</li> <li>Integrate the results of EIS technical studies.</li> </ul>	<p>Primary: corridor scan (physical and via aerial maps), stakeholder engagement outcomes.</p> <p>Secondary: Community plans, Planning Schemes, and Regional Plans.</p>	<ul style="list-style-type: none"> <li>Scanning the corridor enables identification of communities, localities and features which may be impacted</li> <li>Regional and community plans provide an overview of community values, informed by extensive stakeholder engagement</li> <li>The results of other technical studies have provided detailed information about existing conditions e.g. land use.</li> </ul>
<b>Communities</b>	<ul style="list-style-type: none"> <li>Identify social indicators in the areas of influence</li> <li>Research and consultation to identify community composition and characteristics</li> <li>Identify potential impacts on population size or community and cultural values</li> <li>Based on stakeholder inputs, describe sense of place and any impacts on sense of place</li> </ul>	<p>Primary: stakeholder engagement outcomes; proposal workforce estimates and accommodation plans</p> <p>Secondary: Australian Bureau of Statistics (ABS) Census of Population and Housing 2016, NSW Government Projections.</p>	<ul style="list-style-type: none"> <li>Stakeholder inputs are central to SIA</li> <li>The ABS Census provides the most consistent and reliable demographic data available for a large number of indicators.</li> </ul>
<b>Personal and property rights</b>	<ul style="list-style-type: none"> <li>Engage with landowners to understand current use of their properties, and their concerns about proposal impacts</li> <li>With reference to other EIS technical findings, analyse the likelihood and severity of impacts including property severance and loss of connectivity</li> <li>Identify potential negative impacts on the use and amenity of farming and agribusinesses.</li> </ul>	<p>Primary: results of engagement with landowners.</p> <p>Secondary: EIS technical studies.</p>	<ul style="list-style-type: none"> <li>Stakeholder inputs are a key source for identification of impacts on landowners</li> <li>The results of other EIS technical studies assist to identify potential impacts on environmental qualities (e.g. the noise environment) which may result in social impacts.</li> </ul>

Social domains	Assessment method	Data sources	Justification
<b>Way of life</b>	<ul style="list-style-type: none"> <li>Analyse the distribution, availability and cost of housing and accommodation in local communities and LGAs</li> <li>Assess the potential social impacts of proposal accommodation needs on community values</li> <li>Analyse the current labour force profile and proposal workforce estimates</li> <li>Describe employment opportunities, and potential impacts on labour availability and skills availability</li> <li>Identify potential effects on local and regional connectivity, valued places or recreational access.</li> </ul>	<p>Primary: results of engagement with landowners</p> <p>Secondary: Pricerfinder, SQMResearch, realestate.com.au, and other sources as referenced; ABS Census of 2016, NSW Government Projections, Department of Employment, Skills, Small and Family Business (DESSFB) 2019.</p>	<ul style="list-style-type: none"> <li>The ABS Census provides the most consistent and reliable demographic data available for a large number of indicators</li> <li>Other sources cited provide more recently available data on housing trends</li> <li>DESSFB provide the most recent labour and unemployment data.</li> </ul>
<b>Culture and Community values</b>	<ul style="list-style-type: none"> <li>Community engagement to identify values including amenity, cohesion, and community identity</li> <li>Analysis of values identified in community and regional plans and reports</li> <li>Identify proposal design and management measures relevant to community values</li> <li>Consider the outcomes of the visual amenity and cultural heritage assessments undertaken for the proposal and potential for changes to sense of place</li> <li>Describe the potential for the proposal's impacts to affect amenity in local communities, community cohesion or community identity.</li> </ul>	<p>Primary: stakeholder engagement outcomes</p> <p>Secondary: community and regional plans, Landscape and Visual Amenity Assessment undertaken for the proposal.</p>	<ul style="list-style-type: none"> <li>Regional and community plans provide an overview of community values, informed by extensive stakeholder engagement</li> <li>Stakeholder inputs are a key source for identification of potential social impacts.</li> </ul>
<b>Accesses to services and facilities</b>	<ul style="list-style-type: none"> <li>Describe the provision and where known, the capacity of social infrastructure at local and regional levels</li> <li>Consult social infrastructure providers to identify potential impacts on social infrastructure, community capacity, and strategies to reduce impacts and enhance proposal benefits</li> <li>Consult Councils to identify any impacts on community access to infrastructure</li> <li>Describe potential impacts on social infrastructure as a result of workforce influx or other factors.</li> </ul>	<p>Primary: stakeholder engagement outcomes, social environmental scan outcomes.</p> <p>Secondary: desktop research of websites and databases as referenced.</p>	<p>A combination of sources is required to identify the distribution and where known, capacity of social infrastructure.</p>

Social domains	Assessment method	Data sources	Justification
<b>Health and wellbeing</b>	<ul style="list-style-type: none"> <li>■ Consultation and analysis of available evidence regarding health and safety issues</li> <li>■ Consideration of stakeholder inputs regarding health and safety concerns</li> <li>■ Consideration of changes to social conditions and the physical environment which may affect health, wellbeing or safety</li> <li>■ Describe the potential for any change to health determinants.</li> </ul>	<p>Primary: Stakeholder engagement outcomes.</p> <p>Secondary data: ABS Census of Population and Housing 2016, Population Health Information Data Unit (PHIDU) data; EIS assessments of air quality, noise and vibration and traffic impacts.</p>	<p>Stakeholder inputs are a key source for identification of community health determinants and potential impacts on social infrastructure</p> <p>ABS Census provides consistent data on socio-economic health determinants</p> <p>PHIDU provides specialised datasets relating to health status</p> <p>The results of other EIS technical studies assist to identify potential impacts on environmental qualities (e.g. the noise environment) which may result in impacts on health or wellbeing.</p>
<b>Business and Industry</b>	<ul style="list-style-type: none"> <li>■ Research to identify business capacity at local and regional levels</li> <li>■ Analysis of the results of ARTC's consultation with businesses</li> <li>■ Analysis of the type and size of businesses in local communities.</li> </ul>	<p>Primary: Stakeholder engagement outcomes.</p> <p>Secondary: Department of Infrastructure Transport Cities and Regional Development (DITCRD) data; ABS data and other sources as referenced.</p>	<p>Stakeholder inputs are a key source for identification of potential impacts on businesses</p> <p>ABS data and other data as referenced provide insights into the distribution of businesses.</p>

### 3.4.1 Cumulative impact assessment

Cumulative impact assessment considers the potential for the combined impacts of a set of projects to affect a social environment over time. The SIA considers the potential impacts of Inland Rail's adjacent Narrabri to North Star and NSW/QLD B2G projects and those of State significant projects which were planned or being constructed or operated at the time the SEARs were finalised (July 2018) within the Gwydir and Moree Plains LGAs.

The potential area of influence was identified with respect to potential spatial impacts at the local level and social change processes at the local and regional levels. The assessment commenced with development of a list of applicable projects and operations for consideration, consideration of the proposal's areas of spatial and social influence, overlaps with applicable projects or operations, and development of a timeline (construction, operation and decommissioning) to show the temporal relationship between the proposal and other projects and operations.

Review of other projects' EISs identified the potential for cumulative impacts at local and regional levels. Finally, cumulative impacts were considered in evaluating the significance of social impacts and benefits, and collaborative strategies to address cumulative impacts were included in the SIMP.

### 3.4.2 Risk assessment

At the conclusion of the impact assessment stage, risk assessment was undertaken. This considered:

- The likelihood and consequence of potential social impacts and benefits
- A preliminary evaluation of the significance of potential impacts and benefits, considering ARTC's existing commitments
- Proposal-specific management measures
- An evaluation of residual significance, in consideration of proposal-specific management measures being applied.

### 3.4.3 Integration with Environmental Impact Statement findings

The SIA has considered the outcomes of stakeholder engagement conducted for the proposal and the EIS. The SIA also integrates the relevant findings of EIS technical reports as shown in Table 7, including impacts on environmental qualities, cultural heritage or traffic infrastructure, to identify any social impacts. The EIS has also considered issues identified by stakeholders as part of the SIA engagement process.

**Table 7 Links to Environmental Impact Statement findings**

Topic	Purpose	NS2B EIS Sections	NS2B EIS Technical reports	SIA Sections
<b>Land use and property</b>	Identify land tenures and land use within and adjacent to the proposal.	Chapter 22: Land use and property	Not applicable	Section 7.1.1, 7.2.3
<b>Cultural heritage</b>	Describe any impacts on Aboriginal or non-Aboriginal cultural heritage.	Chapter 12: Heritage	Appendix E: Aboriginal heritage Appendix F: Historical heritage	Section 7.3.2
<b>Economics</b>	Describe the proposal's economic impacts.	Chapter 23: Socio-economic impact assessment	Appendix I: Economic assessment	Section 7.4.5
<b>Stakeholder Engagement</b>	Describe the process and outcomes of stakeholder and community engagement	Chapter 9: Rehabilitation strategy	Appendix D: Consultation summary	Section 6
<b>Landscape Character and Amenity</b>	Describe impacts on the visual amenity of the built and natural environment.	Chapter 21: Landscape character and amenity	Appendix P: Landscape and visual impact assessment	Section 7.1.2
<b>Air quality</b>	Identify potential for changes to air quality to affect health or amenity.	Chapter 17: Air quality	Appendix L: Air quality assessment	Section 7.3.2
<b>Noise and vibration</b>	Describe the potential for impacts on amenity or wellbeing as the result of noise during construction or operations.	Chapter 16: Noise and vibration	Appendix J: Construction noise and vibration Appendix K: Operational noise and vibration	Sections 7.1.2 and 7.7.4
<b>Traffic</b>	Describe the potential for changes to connectivity or traffic safety.	Chapter 19: Climate change and risk adaption	Appendix M: Traffic impact assessment	Sections 7.1.3 and 7.7.6



Topic	Purpose	NS2B EIS Sections	NS2B EIS Technical reports	SIA Sections
<b>Hazard and risk</b>	Describe and assess potential for threats to safety.	Chapter 24: Hazard and risk	Not applicable.	Section 7.7.8
<b>Surface water and hydrology</b>	Describe the findings of the assessment of potential impacts on hydrology and flooding.	Chapter 13: Surface water and hydrology and water quality	Appendix H: Hydrology and flooding	

### 3.5 Social Impact Management Plan

The SIMP provides mitigation strategies and management measures for social impacts including measures which will enhance the proposal's benefits for communities. The process for SIMP development included:

- Stakeholder engagement to identify stakeholders' preferred mitigations
- Incorporating ARTC's mitigation and enhancement commitments
- Identifying supplementary mitigation, management and enhancement strategies
- Developing performance indicators and a monitoring and reporting framework to support adaptive management of social impacts.

The SIMP includes five action plans addressing:

- Community and stakeholder engagement
- Workforce management
- Housing and accommodation
- Local business and industry content
- Health and community wellbeing.

### 3.6 Data quality

Table 8 provides information on the reliability of key data sources used in the SIA.

**Table 8 Data quality summary**

Data type/set	Source	Currency	Reliability
<b>Demographic data</b>	ABS Census of Population and Housing.	2016	Good, however: <ul style="list-style-type: none"> <li>■ There are minor variances in totals due to ABS rounding procedures</li> <li>■ Indigenous people are traditionally under-represented in Census (~10%)</li> <li>■ Changes in demographic features may have occurred since 2016, including as a result of the drought e.g. lower incomes or population loss</li> </ul>
<b>Population and housing Projections</b>	NSW DP&E.	2016	As high as reasonably possible There is some uncertainty regarding the effect of newly proposed projects, drought and economic trends on projections
<b>Housing data</b>	ABS Census, SQM Research.	2018	Confirmed through comparison of data sources



Data type/set	Source	Currency	Reliability
<b>Public Health Information Development Unit (PHIDU)</b>	ABS Census of Population and Housing and other sources as referenced.	Variable, as referenced	Good, however the local relevance of modelled estimates may be variable, and changes to social health determinants are likely since the data were collected/modelled
<b>Social infrastructure provision</b>	Stakeholder inputs and various research sources.	2018	Good - based on stakeholder feedback.
<b>Labour force</b>	Department of Jobs and Small Business Labour Market Portal.	2018	Subject to seasonal fluctuations and cumulative impacts of major projects. Rural unemployment may be under-represented.

## 4 Proposal description and SIA Scope

This section describes the proposal, including its history and key elements, and outlines the scope of the SIA, including potentially material impacts and the proposal's areas of social influence.

### 4.1 Current situation

The proposal makes use of the existing non-operational rail corridor between North Star and Whalan Creek, and includes a section of greenfield rail line that crosses the Macintyre River and joins QR South Western System over the NSW/QLD border (the border).

### 4.2 Proposal history

The original ARTC study area between North Star and Yelarbon was identified in ARTC's 2010 Inland Rail Alignment Study (IRAS) (ARTC, 2010) and endorsed in 2014 by the Inland Rail Implementation Group (IRIG). The Phase 1 Concept Assessment commenced in early 2016 and involved the development of the 2016 Concept Alignment based on the ARTC 2010 IRAS (ARTC, 2018).

The 2016 Concept Alignment informed initial discussions with the community and stakeholders including local councils, landowners, key customers, catchment groups, irrigators groups and farmers' representatives. Feedback from these discussions highlighted support for a predominantly brownfield alignment that followed the existing non-operational rail corridor towards Boggabilla.

In May 2017, building on community input and stakeholder feedback, six options were developed, investigated and assessed. This assessment determined that the study area would deviate from the existing non-operational Boggabilla rail line at the southern side of Whalan Creek Bridge and branch out to the east of the currently non-operational Boggabilla rail line.

Key themes raised during ARTC's consultation between 2016 and 2017 included (ARTC, 2018):

- Avoid houses and property infrastructure where possible
- Minimise impacts on cropping and higher intensity agricultural areas
- Use the existing non-operational rail corridor where possible to reduce impacts on agricultural properties
- Potential for impacts on property values and lost viability of agricultural properties
- Emotional, economic and social impacts associated with Inland Rail studies and unknowns relating to the proposal
- Potential to exacerbate existing flooding risks
- Safety and connectivity issues associated with level crossing requirements and road closures
- The benefits of connections to regional freight opportunities in northern NSW and western Queensland.

Issues raised by stakeholders between 2016 and 2017 have been considered in the SIA.

### 4.3 Proposal description

The proposal is a new rail corridor approximately 30 km in length and would connect to the Narrabri to North Star project in the south and the B2G project in the north.

The proposal will include:

- Approximately 25 km of new track within the existing non-operational Boggabilla rail corridor, between North Star (Ch 0.9 km) and the greenfield deviation (Ch 25.7 km)
- Approximately 5 km of new track within a greenfield rail corridor, between the greenfield deviation (Ch 25.7 km) and the NSW/QLD border (Ch 30.7 km)
- One crossing loop (to allow trains travelling in opposite directions to pass each other) comprising approximately 2.2 km section of single line, standard gauge track, running roughly parallel to the main track
- One maintenance siding and three associated turn outs
- Road rail interface locations including:
  - Grade separations (bridges) over Bruxner Way (at Ch 25.8) and Tucka Tucka Road (at Ch 30.1 km)
  - Two active level crossings on North Star Road (at Ch 7.0 km and Ch 19.9 km)
  - Two passive level crossings, at Forest Creek Road (at Ch 12.2 km) and an Unnamed Road (Ch 9.2 km)
- Consolidation of existing interfaces between the existing non-operational rail corridor and private and public roads, involving the closure of eight unnamed roads
- Thirty-nine culvert locations and 11 bridge crossings, including a 1.8 km long rail bridge over the Macintyre River and Whalan Creek, which are major water courses
- Ancillary works including road and utility realignments, rail maintenance access roads, fencing, signage, signalling enabling works and land acquisition.

The proposal crosses the Macintyre River and its floodplain, associated tributaries and numerous ephemeral creeks. Key waterways within the study area include Mobbindry Creek, Forest Creek, Back Creek and Whalan Creek.

A general corridor width of 40 m has been adopted for the proposal. The corridor will be fenced where necessary to prevent people and stock accessing the rail infrastructure.

The proposal's indicative timeframe is:

- 2017 to 2020: Design, planning and approvals
- 2020 to 2021: Pre-construction and land acquisition
- 2021 to 2024: Construction
- 2025: Commencement of operations, dependent on the completion of adjacent Inland Rail sections.

#### **4.3.1 Land acquisition**

ARTC has sought to minimise impact to local landowners by utilising the existing non-operational rail corridor for most of the proposal's alignment and has sought to utilise non-private land to further reduce the impact of land acquisition and disruption to business operations for private landowners where possible. The existing non-operational rail corridor is owned by the NSW Government (Transport for NSW) and leased by the proponent.

The acquisition of land is required for the proposal and based on the proposal's reference design is likely to be limited to partial acquisitions. The extent of property impacts is to be refined and confirmed prior to detailed design. For partial acquisitions, property adjustment plans are to be developed in consultation with the property owners to minimise any potential operational effects on each property.

Leasing requirements are unknown at this stage. Consultation regarding agreements will be undertaken with landowners prior to works commencing.

All acquisitions of private land would be undertaken in accordance with the requirements of the *Land Acquisition (Just Terms) Compensation Act 1991*.

#### **4.3.2 Pre-construction**

It is anticipated that pre-construction and land acquisition will occur from 2019 until late 2020. Pre-construction activities will include activities to make the key construction sites ready and provide protection to the public, including:

- Securing land access and access to borrow material
- Vegetation clearing in the corridor and for associated infrastructure
- Ecological, heritage and geological investigations
- Demolishing buildings and other structures that are not State or local heritage items
- Adjusting, modifying and protecting existing utilities and services
- Transport network modifications and establishment of access tracks
- Establishing ancillary construction facilities including hardstand areas for laydown, storage, and administration facilities, and power, water and other utilities
- Installation of environmental mitigation measures.

#### **4.3.3 Construction**

Subject to approval, construction of the proposal is planned to start in 2021 and be completed in 2025. The construction program will include:

- Site preparation including site clearance, establishment of site compounds and facilities, installation of temporary and permanent fencing, installation of drainage and water management controls and construction of site access including temporary haul roads
- Early works, including relocation of impacted utilities and roads
- Resourcing all construction and construction-related materials, including won material, manufactured materials and construction water
- Civil works, including bulk earthworks, construction of cuts and embankments, installation of permanent drainage controls, bridge and watercourse crossing construction, and environmental management measures (e.g. fauna crossings and noise treatments)
- Construction of bridges and viaducts at major waterways, and major infrastructure crossings
- Track works including the installation of ballast, sleepers and rails
- Installation of rail systems infrastructure and wayside equipment including signals, turnouts and asset monitoring infrastructure

- Commissioning, integration testing and handover process to achieve operational readiness
- Landscaping and rehabilitation treatments to areas disturbed during construction.

Laydown areas and demountable buildings used during construction will be progressively decommissioned and the area rehabilitated as their use is completed. Some office facilities may be left within the railway corridor for the commissioning phase.

Construction work will be undertaken from Mondays to Sundays from 6.30 am to 6.00 pm.

Following construction, testing and commissioning of the rail line and communication/signalling systems will be undertaken to ensure compliance with ARTC's operational and safe working requirements. All construction sites, compounds and access routes would be returned to the same or better condition than prior to construction commencing.

#### **4.3.4 Operations**

The proposal has a design life of 100 years and is likely to operate from 2025 to 2124. The proposal will initially accommodate double-stacked container freight trains of up to 1,800 m length, with potential for future accommodation of freight trains of 3,600 m length. Train speeds will vary between 80 km/hr and 115 km/hr.

ARTC estimates a gradual increase in the number of trains using Inland Rail. The current assumption for the proposal is that there will be up to 14 trains per day in 2025, increasing to an estimated 21 trains per day by 2040.

Operational processes will include:

- The use of the railway for freight purposes
- General track, infrastructure and corridor maintenance, including occasional major maintenance such as track reconditioning and topping up of ballast
- Train speeds will vary between 80 km/hr and 115 km/hr.

Train stop locations for the proposal are yet to be confirmed.

#### **4.3.5 Workforce**

Pre-construction activities are anticipated to require a small contract workforce, in the order of 20 to 50 personnel

A construction workforce of up to 350 personnel will be required during 2021 to 2025. The size and composition of the construction workforce will vary depending on the construction activities being undertaken and the staging strategy adopted. The core construction workforce will consist of professional staff, supervisors, trades workers and plant operators, with earthworks crews, bridge structure teams, capping and track-works crews working at different periods through the construction phase. It is likely that a portion of the construction workforce will be sourced from nearby communities.

Once operational, a workforce of approximately 15 to 20 personnel are expected, to undertake monitoring and maintenance of the track and infrastructure, signalling, environmental monitoring and management of land and infrastructure in the rail corridor. Workforce accommodation

A workforce accommodation camp with a capacity of up to 350 beds will be required during the construction phase.

For operations, a combination of local and non-local personnel is expected to be employed. A small number of non-local personnel may access short term accommodation on a casual basis, but there is no potential for a population influx to local communities. Construction accommodation is discussed in Section 7.5.1 .

#### 4.3.6 Decommissioning

The proposal has a design life of 100 years but could be decommissioned in 2124 to 2125. This would involve removal and recycling of the track and infrastructure which is not required for other future purposes. The corridor would then be rehabilitated to an agreed condition which would enable future land uses to proceed, and access roads and tracks that will no longer be used will be decommissioned.

The surface of all rehabilitated areas will be relieved of compaction prior to rehabilitation according to a Rehabilitation Plan that will be developed in later phases of the proposal.

### 4.4 Social Impact Assessment scope

This section describes the results of the SIA scoping process.

#### 4.4.1 Proposal elements and operational considerations

Proposal elements with potential for social impacts and benefits are summarised in Table 9.

**Table 9 Proposal elements of relevance to Social Impact Assessment**

Key elements	Details	Considerations
<b>Construction</b>		
<b>Corridor and associated works construction</b>	<p>Creation a rail corridor of generally 40 m width. This will include:</p> <ul style="list-style-type: none"> <li>■ A 25 km upgrade of the existing non-operational rail line and reconstruction to ARTC standards</li> <li>■ Construction of a new greenfield rail corridor of approximately 5 km to the NSW/QLD border</li> <li>■ One crossing loop at Boonal between Ch 22.7 km and Ch 24.9 km</li> <li>■ A connection with the Narrabri to North Star project to the south and B2G project in the north.</li> </ul>	<ul style="list-style-type: none"> <li>■ Settlement pattern</li> <li>■ Amenity - noise, visual impacts and dust</li> <li>■ Privacy and security</li> <li>■ Road network</li> <li>■ Agricultural operations</li> <li>■ Rural character</li> <li>■ Health</li> <li>■ Community safety</li> </ul>
<b>Laydown areas and access roads</b>	Laydown areas are required in several locations in study area. Access roads are required along the proposal to allow personnel to access work locations. Further information is available in EIS Chapter 7: Construction of the proposal.	<ul style="list-style-type: none"> <li>■ Rural character</li> <li>■ Residential amenity</li> <li>■ Traffic safety</li> <li>■ Waterway access</li> </ul>
<b>Construction employment</b>	Up to 350 construction personnel will be required, with a diverse range of skills groups (refer Section 7.4.1).	<ul style="list-style-type: none"> <li>■ Employment and training</li> <li>■ Access to skilled labour</li> </ul>
<b>Construction supplies and services</b>	The proposal will require construction supplies, including borrow material, ballast material, pre-cast concrete, concrete sleepers and turnout panels, steel, fencing, electrical components, fuel and consumables. A range of services will also be required during construction and operations, many of which may be sourced locally (refer Section 7.4.4).	<ul style="list-style-type: none"> <li>■ Local supply opportunities</li> <li>■ Traffic safety</li> <li>■ Amenity of properties near borrow pits or quarries.</li> </ul>

Key elements	Details	Considerations
<b>Bridge construction</b>	The proposal requires 11 new bridges including nine rail bridges over waterways, a rail bridge over Bruxner Way and is a significant rail crossing over Tucka Tucka Road and the Macintyre River.	<ul style="list-style-type: none"> <li>■ Road network access</li> <li>■ Visual amenity</li> <li>■ Noise</li> <li>■ Flooding potential.</li> </ul>
<b>Roadworks and level crossing construction</b>	Re-alignment of Bruxner Way will be required to allow for construction of a rail over road bridge. The proposal will also require construction of two active level crossings and two passive level crossings on public roads (refer below). Passive (uncontrolled) level crossings will be constructed on private properties to maintain access across the proposal.	<ul style="list-style-type: none"> <li>■ Road network access</li> <li>■ Travel times.</li> </ul>
<b>Operation</b>		
<b>Corridor security</b>	Standard rural fencing (post and wire) will be required to the extent of the rail corridor but is not generally required between the corridor and an adjacent railway or road corridor. Where superior fencing is required (near roads or to prevent trespass), a 1.8 m chain wire fence may be provided with gates at corridor entry/exit locations and private level crossings.	<ul style="list-style-type: none"> <li>■ Connectivity</li> <li>■ Stock and agricultural equipment movements</li> <li>■ Pedestrian movements</li> <li>■ Community safety</li> </ul>
<b>Rail operation</b>	<p>An estimated 21 train movements may use the proposal by 2040.</p> <p>Rail operation will include double-stacked container freight trains of up to 1,800 m, with potential for future accommodation of freight trains of 3,600 m.</p> <p>Active (controlled) level crossings will operate on:</p> <ul style="list-style-type: none"> <li>■ North Star Road, around Ch 7.0 km</li> <li>■ North Star Road around Ch 19.0 km.</li> </ul> <p>Passive (uncontrolled) level crossings will operate on:</p> <ul style="list-style-type: none"> <li>■ Forest Creek Road, around Ch 12.1 km</li> <li>■ An unnamed road (Ch 9.2 km).</li> </ul> <p>Regular track maintenance would also be performed.</p>	<ul style="list-style-type: none"> <li>■ Residential amenity</li> <li>■ Community health and safety</li> <li>■ Regional development</li> <li>■ Emergency services access</li> <li>■ Community safety</li> <li>■ Traffic safety</li> <li>■ Agricultural movements</li> <li>■ Noise and/or vibration.</li> </ul>
<b>Operational employment</b>	Approximately 15 to 20 personnel are estimated as required for operation. Occupational groups would include train drivers, signallers and maintenance staff.	<ul style="list-style-type: none"> <li>■ Employment and training opportunities.</li> </ul>
<b>Operational supplies</b>	Operational supplies will include ballast material, and services and materials for maintenance of the corridor, bridges, fences, crossings, and rehabilitation	<ul style="list-style-type: none"> <li>■ Local and regional supply opportunities.</li> </ul>
<b>Decommissioning</b>		
<b>Removal and rehabilitation</b>	The rail track and infrastructure would be removed, and corridor rehabilitation undertaken.	<ul style="list-style-type: none"> <li>■ Employment and training opportunities.</li> </ul>

#### 4.4.2 Stakeholders

As part of the scoping stage, analysis of select indicators in the study area and nearby communities was undertaken to identify the potential for specific vulnerabilities to social impacts (refer Section 5.2). In summary, the analysis identified low potential for disadvantage in the Statistical Area 1 (SA1) areas transected by the study area and in North Star, and very high potential for disadvantage in Boggabilla and Toomelah.

During August–November 2018, the SIA team consulted community members in Toomelah, Boggabilla, North Star and Goondiwindi (refer Section 6.2) to identify their views on social impacts and benefits. Consultation was also undertaken with MPSC, GSC and GRC to identify Councils' views on potential impacts and benefits, and with directly affected landowners. A June 2018 submission made jointly to ARTC by landowners in the proposal's greenfield section and the Toomelah Boggabilla LALC in response to the NS2B Alignment Assessment Report was also reviewed and their key concerns noted.

Stakeholder inputs on the scope of potential impacts and the stakeholders who may be affected are summarised in Table 10.

**Table 10 Issues raised and affected stakeholders**

Potential Issues	Directly affected and adjacent landowners	Community members and groups	Aboriginal communities	Councils	Government agencies	Businesses	Service providers
<b>Surroundings</b>							
Impacts on informal rail crossing points	✓	✓	✓			✓	
Noise from trains	✓		✓				
Rail corridor's visual impact	✓	✓	✓	✓			
Concern about any effect on Toomelah community's ties to the surrounding area			✓				
<b>Community</b>							
Potential to impact on areas used for social and cultural purposes			✓				
Impacts on natural or rural character	✓	✓					
<b>Employment</b>							
Potential to supply the proposal's construction			✓				✓
Potential to benefit planned intermodal facilities				✓			✓
Loss of farming productivity affecting employment	✓	✓					
<b>Property Rights</b>							
Concern that properties that span the proposal will be significantly disrupted	✓						
Restricted movement of agricultural commodities across the rail corridor to handling facilities	✓						✓
Potential for corridor incursion on high value farming elements potential. cattle yards or dams	✓						✓
Importing and movement of material resulting in increased threats to biosecurity	✓		✓	✓	✓		
Potential for impacts on property values	✓	✓					
Potential for changes in flooding patterns to affect private properties	✓	✓	✓	✓			
<b>Health and Wellbeing</b>							
Concern regarding safety of rail corridor in relation to children and young people in Toomelah	✓	✓	✓	✓			
Impacts of dust (construction and operation)	✓		✓				✓



Potential Issues	Directly affected and adjacent landowners	Community members and groups	Aboriginal communities	Councils	Government agencies	Businesses	Service providers
Uncertainty regarding property acquisitions	✓			✓			
Anxiety regarding the potential for a change to or increase in flooding impacts	✓	✓	✓	✓	✓	✓	✓
Concern regarding coal transport and potential effects of coal dust on health and amenity	✓	✓					✓
Adverse impacts on the local road network during construction leading to safety issues	✓	✓					
<b>Access to Services and Infrastructure</b>							
Rail crossings affecting emergency service vehicle access	✓	✓	✓	✓	✓		✓
Demands on health and emergency services from non-local construction workers		✓	✓	✓	✓		
Disruption to connections between Boggabilla and Toomelah, affecting service access		✓	✓	✓	✓		

#### 4.4.3 Potential for cumulative impacts

To its south, the proposal would connect to Inland Rail's NSNS project and to the north, to the B2G project. Construction of these and other Inland Rail projects could coincide with the proposal's construction, leading to widespread changes to connectivity and amenity and a significant labour requirement. Co-incident construction of other projects (such as solar farms) is also possible. Cumulative impacts are discussed in Section 7.9.

#### 4.4.4 Matters checklist

Matters listed in the EIS and SIA scoping tool were considered in relation to the potential for social impacts. The Scoping Tool as described in the SIA Guideline Appendix B includes a generic checklist of social, environmental and economic matters for consideration. Table 11 lists the matters which are considered likely to be affected by the proposal, if impacts are not mitigated.

**Table 11 Matters checklist results**

Social and environmental matters		Proposal activities likely to affect receptors
<b>Amenity</b>	Acoustic	Construction noise and associated traffic/transport noise Noise related to freight trains affecting dwellings and/or rural amenity/character
	Visual	Imposition of rail corridor in rural landscape
<b>Access</b>	Access to property	Changes to existing property access arrangements and property acquisitions
	Utilities	Relocation of water pipelines or other services
	Road and rail network	Changes to existing rail corridor affecting road connections and stock and equipment crossings
	Connectivity	Alterations to road network

Social and environmental matters		Proposal activities likely to affect receptors
<b>Built environment</b>	Public infrastructure	Impacts on utilities
		Development of rail network
<b>Heritage</b>	Cultural	Changes to visual amenity or agricultural land use
	Aboriginal cultural	Construction affecting Cultural Heritage sites
	Built	Land acquisition resulting in disturbance of farm infrastructure
<b>Community</b>	Health	Anxiety regarding changes to property ownership, amenity or flooding
	Housing	Property acquisition
	Safety	Intersections with road network, rail freight operations
	Services and facilities	Construction workforce demand on health and emergency services
		Accommodation camp servicing requirements
	Cohesion	Changes to connectivity and potentially cohesion
	Employment	Potential for residents in nearby communities to access construction employment and potentially longer-term employment
<b>Economic</b>	Natural resource use	Disruption to current water access
	Livelihood	Potential for disruption to agricultural properties affecting employment
	Regional development	Potential to catalyse local or regional development
<b>Air</b>	Particulate matter	Dust generation during construction
	Emissions	Potential diesel emissions during operations
<b>Biodiversity</b>	Native vegetation	Vegetation disturbance during construction
	Native fauna	Potential for corridor to impact on habitat
<b>Land</b>	Agricultural uses	Potential for corridor to cause severance or disruption of agricultural uses
	Capability	Potential for changes to agricultural land capacity
<b>Water</b>	Hydrological flows	Potential for changes to overland flows
<b>Risks</b>	Flood waters	Potential for change to flooding patterns/afflux/deflux
	Bushfire	Construction involving ignition sources and rail operation

Matters which were considered unlikely to be affected include microclimate or gases, offsite parking, the public domain (as the corridor would not go through towns), odour impacts, topography and coastal hazards. Matters upon which impacts will be determined as part of the EIS include water availability and quality, opportunity costs, and soil stability, structure and chemistry.

#### 4.4.5 Potential material impacts

This section provides a preliminary assessment of potential material impacts, relying on the analysis of relevant matters, proposal interfaces with the social environment, and stakeholder inputs on potential impacts and benefits. Table 12 summarises potentially material impacts (those that matter most to stakeholders), having regard to the estimated extent, duration and severity of impacts, and the specific sensitivities, i.e. qualities that influence communities' experience of impacts. All potential impacts identified are considered as potentially material, i.e. without mitigation, they could affect social values or conditions. Aspects which are 'to be determined' will rely on EIS findings and consultation results to determine the severity and sensitivity.

**Table 12 Potential material social impacts and opportunities**

Potential impact	Extent	Duration	Severity	Sensitivities
<b>Surroundings</b>				
Impacts on traffic safety due to degradation of local roads or increased traffic	Proposal region	Construction	Low-Moderate	Isolated communities
Potential for changes to road network to disrupt connectivity	Proposal region	Life of project	Moderate-High	Isolated communities
Impact on residential amenity due to rail/train noise, visual amenity impacts or air quality changes	Near study area	Life of project	To be determined	Residences in rural areas and towns
Potential for rail line fencing to prohibit access to areas in corridor	Various sites	Life of project	Moderate	Rural and residential uses
Disruption of pedestrian or vehicle access	Near study area	Construction	Moderate-High	High dependence on private vehicles
Concern regarding potential effect on flooding	Floodplains	Life of project	Dependent on design	Flood-vulnerable areas
Road traffic congestion at level crossings and implications for safety	Various sites	Life of project	Moderate	Lack of familiarity with freight rail
Potential severance of travelling stock reserves (TSR)	Study area	Life of project	Low-Moderate	Rural use
<b>Personal and property rights</b>				
Impacts on property access and transport routes, including on-property movements	Near study area	Life of project	Low- moderate	Large farms and agribusinesses
Property severance leading to loss of productivity	Near study area	Life of project	To be determined	
Noise impacts affecting the amenity of residential properties	Near study area	Life of project	To be determined	Rural and residential uses
Concern about the potential for impacts on property values	Near study area	Life of project	Low-moderate	Varied, depending on disturbance
Impacts on access to water access	Proposal region	Life of project	To be determined	Rural and residential uses

Potential impact	Extent	Duration	Severity	Sensitivities
<b>Community</b>				
Displacement of households within/near corridor due to land acquisition or noise impacts	Study area	Life of project	To be determined	Long term connections to properties
Potential for a temporary increase in North Star population	North Star	Construction	High	Limited service provision
Concern about impacts on cultural and natural landscape values	Near study area	Life of project	To be determined	Varied, and including Aboriginal cultural values
Impacts on Toomelah community values e.g. connection to land and Macintyre River	Toomelah	Life of project	Moderate	Vulnerable community
Potential impacts on Aboriginal cultural heritage	Study area and nearby Aboriginal communities	Life of project	To be determined	High value to Aboriginal community members
Potential opportunities for the advancement of Aboriginal people and communities through employment or business opportunities.	Proposal region	Life of project	Moderate to high positive	Disadvantaged community
<b>Way of life (employment, housing and businesses)</b>				
Employment and training opportunities proposal construction	Proposal region	Construction	Short term benefit	Indigenous and youth unemployment
Employment and training opportunities during operation	Proposal region	Life of project	Long term benefit	
Potential for indirect employment (proposal or personnel expenditure) during construction	Proposal region	Construction	Short term benefit	Local communities desiring employment diversification
Effect on housing access	Local communities	Construction	Low-moderate	Low income households
Opportunity to support business viability/growth	Proposal region	Life of project	Low- moderate	Potential major opportunity
Competition for labour and skills due to construction demand	Proposal region	Construction	Low- moderate	Agricultural industry labour needs
Opportunities for local and regional businesses to participate in the proposal's supply chain	Proposal region	Construction	Low- moderate	Local communities desiring economic diversification
Potential for local industries to use Inland Rail to move produce to markets	Proposal region	Life of project	Low- moderate	
Impacts on scenic values affecting tourism potential	Near study area	Life of project	Low- moderate	

Potential impact	Extent	Duration	Severity	Sensitivities
<b>Community health and wellbeing</b>				
Potential impacts on mental health due to stress or anxiety	Near study area	Pre-construction, ongoing	Varied	Residents vulnerable to stress
Potential to exacerbate existing disadvantage in Aboriginal communities or safety risks for children, young people and motorists	Near study area	Construction and ongoing	Moderate-High	Disadvantaged community members
Potential to change flooding patterns or exacerbate flooding impacts with risk to community safety	Differential by property	Construction and ongoing	Low - moderate	Regular floods
Potential to address social disadvantage through employment and business opportunities	Local communities	Construction and ongoing	Moderate - high	High local unemployment
Increased traffic volumes on rural roads and highways with potential for concerns about traffic safety	Proposal region	Construction	Moderate - high	Residential and tourism uses
Connectivity, housing and/or amenity impacts on people already experiencing social disadvantage	Local communities	Life of project	Moderate - high	Disadvantaged communities
Potential to remove trucks from local and regional roads	Proposal region	Life of project	Moderate	N/A
<b>Access to services</b>				
Increased demand for local health, police and emergency services during construction	Proposal region	Construction	Moderate	Under-resourced services
Impediments to emergency services access (changes to travel network and level crossing wait times)	Roads with level crossings	Life of project	Moderate - high	High community concern
Potential to increase demand for Council and community services	Proposal region	Life of project	Low	Small communities with limited infrastructure
Potential to disrupt Toomelah residents' access to services in Boggabilla and/or Goondiwindi during construction	Local communities	Construction	Low	Disadvantaged communities

## 4.5 Areas of social influence

The proposal's area of social influence was defined by considering:

- Social characteristics at local and regional levels
- Stakeholders' inputs about the proposal's potential to affect them (refer Section 4.4.2)
- The potential for proposal elements and activities to affect the social environment near the study area or in nearby communities
- Impacts or benefits which may be experienced by residents or other stakeholders in the region which includes the Moree Plains, Gwydir and Goondiwindi Shire LGAs
- The potential for impacts in relation to the labour force at the broader regional level.

The geographic reach of impacts can vary depending on the impact being assessed. For example, residents who live close to the rail alignment could experience impacts related to land acquisition, land severance or noise, whilst those who live in nearby communities could experience different impacts e.g. traffic disruptions or changes to service access. Impacts such as demand for accommodation and benefits related to employment may be experienced across a region.

The areas of social influence are shown in Figure 1 and are the:

- 'Study area'
- 'Nearby communities' which refers to North Star, Boggabilla, Toomelah and Goondiwindi
- 'Proposal region' which refers to the Gwydir, Moree Plains and Goondiwindi LGAs.

The study area for the economic impact assessment (EIS Appendix I) includes the three LGAs in the proposal region – Goondiwindi, Moree Plains and Gwydir LGAs. For the purposes of the regional economic impact assessment, the economic catchment is defined in Appendix I: Economic impact assessment as the New England and North West Statistical Area Level 4 (SA4), as representative of the broader region within which workforce and business participation could result in regional economic benefits.

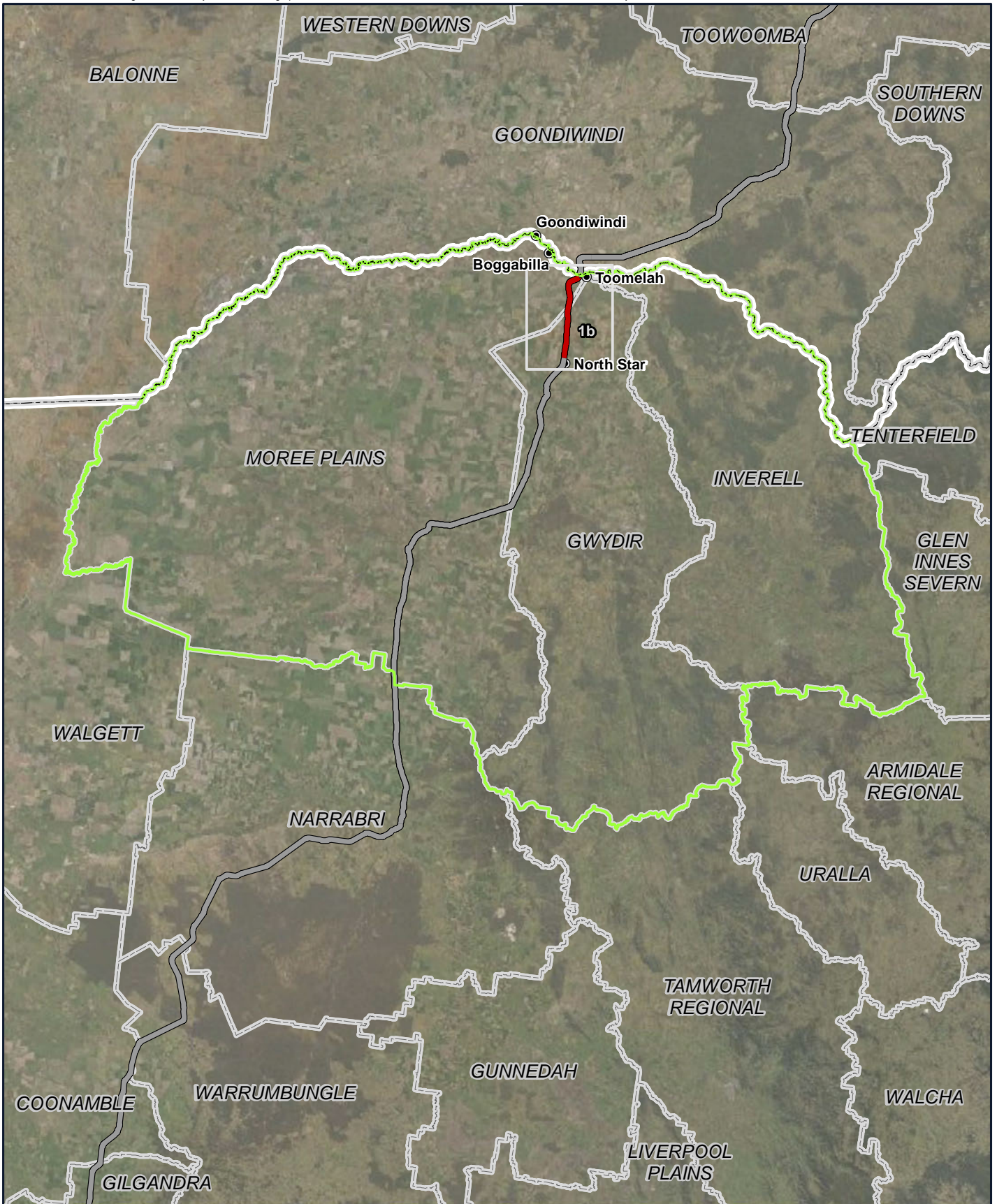
### 4.5.1 Study area

The 'study area' as defined in the SIA refers to the:

- Rail corridor and associated crossing loop, maintenance siding, road crossings, bridges, culverts and associated infrastructure (shown in Figure 1 as the study area) and referred to in the EIS as the permanent disturbance footprint
- Temporary disturbance footprint for construction, including laydown areas, road and rail crossing work areas and a construction accommodation camp.

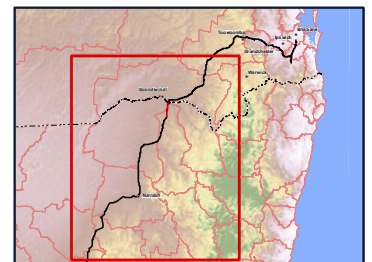
Most of the land near the study area is freehold. There are 10 private landowners directly affected by the rail corridor, most of which are large rural holdings producing cattle, cotton, wheat and/or crops. Of these, seven landowners are within the brownfield section (adjacent to the existing rail corridor) and three are affected by the greenfield section, requiring acquisition of land.





## Legend

- Localities
- North Star to NSW/QLD border alignment
- Adjoining alignments
- NSW/QLD border
- Local Government Areas
- Proposal region



A4 scale: 1:1,750,000  
0 5 10 20 30 40 50 Km

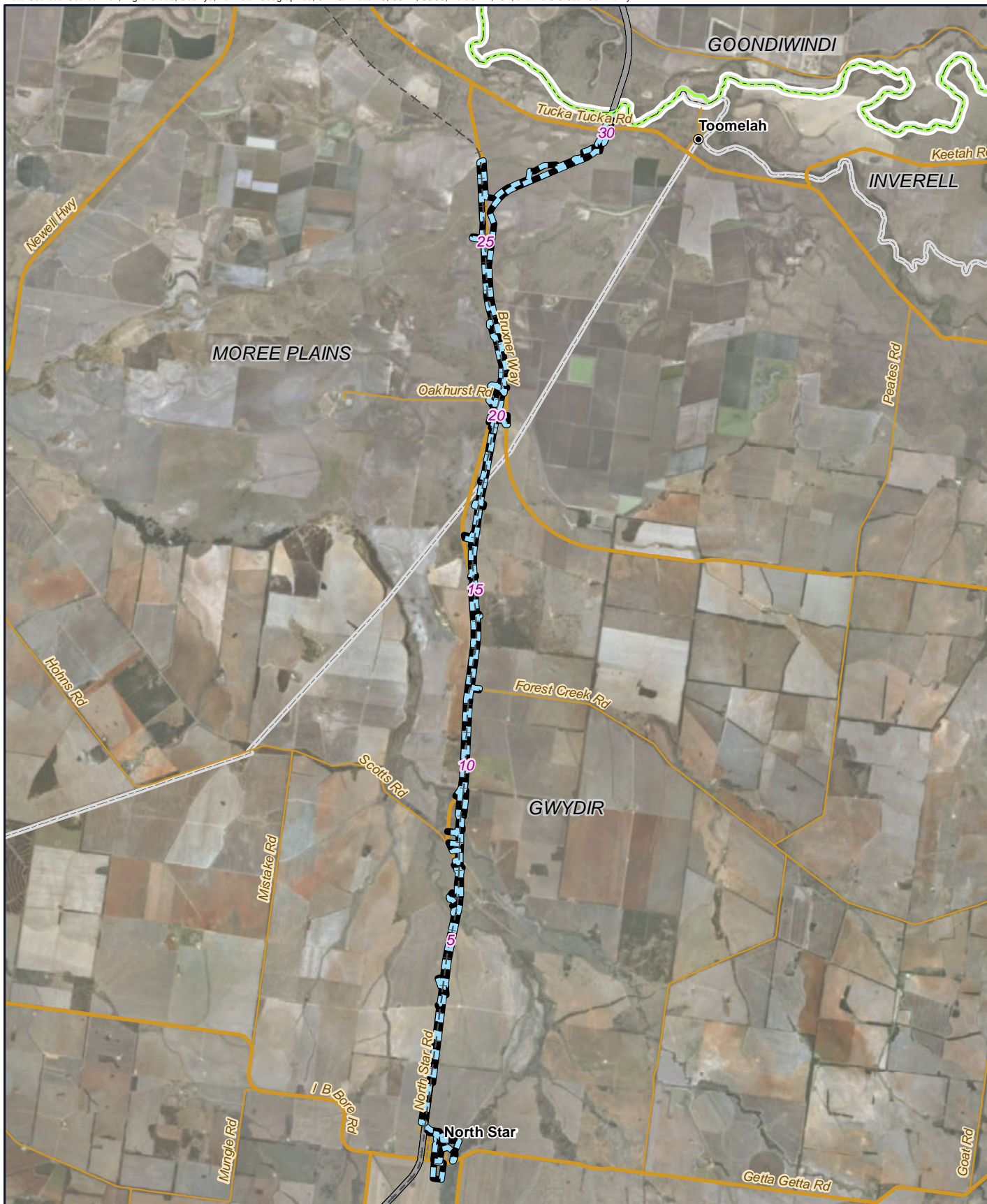


Date: 11/02/2020 Version: 8  
Coordinate system: GDA 1994 MGA Zone 56

## NORTH STAR TO NSW/QLD BORDER

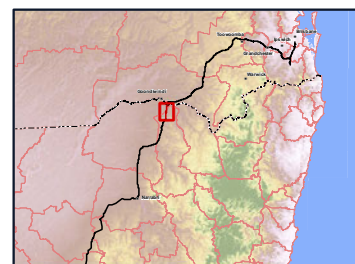
Figure 1a: Areas of social influence





## Legend

- Localities
- 5 Chainage (km)
- Adjoining alignments
- Major roads
- Minor roads
- NSW/QLD border
- Existing rail (operational)
- Existing rail (non-operational)
- Local Government Areas
- Proposal region
- SIA study area



A4 scale: 1:150,000  
0 0.5 1 2 3 4 5 Km



Date: 11/02/2020 Version: 8  
Coordinate system: GDA 1994 MGA Zone 56

## NORTH STAR TO NSW/QLD BORDER

Figure 1b: Areas of social influence



Assessment of potential impacts on landowners in the study area considered:

- Analysis of key indicators in the Statistical Area 1 (SA1) areas within 1 km of the study area (refer Section 5.2.1) to identify the nature of settlement and any vulnerabilities to be considered in the SIA
- The results of consultation with directly affected and nearby landowners regarding the range and type of impacts and benefits they anticipate
- Analysis of the interface between the study area (and associated activities) and nearby land holdings
- EIS findings of relevance to social impacts including land use and property impacts, groundwater impacts, noise and vibration impacts, air quality, visual and landscape impacts, and traffic impacts.

#### **4.5.2 Nearby communities**

Towns within 20 km of the proposal have been considered as nearby communities, as these are the communities most likely to experience social impacts and are well located to benefit from the proposal.

The village of North Star is located approximately 1.5 km south of the study area. North Star is Gwydir Shire's most northern township, and is a local centre for surrounding landowners, offering a public school, community networks and places to socialise. The North Star community – including the town and surrounding landholdings – may be affected by construction traffic, rail noise, the location of the workforce accommodation camp, and/or cumulative issues between the Narrabri to North Star project and the proposal. The village has a population of approximately 50 people, and the North Star State Suburb (SSC) which includes surrounding properties had a population of approximately 230 people in 2016.

Boggabilla is a small town at the juncture of the Newell Highway and the Bruxner Way and is located approximately 8.5 km west of the study area. Boggabilla is surrounded by rural land uses and bounded by the Macintyre River. The Boggabilla SSC includes Boggabilla town, Toomelah and households on surrounding properties, with a total estimated population of approximately 990 people in 2016.

Toomelah, an Aboriginal community, is located approximately 2 km east of the most northerly part of the study area, adjacent to the Macintyre River. Toomelah is defined by the ABS as an Urban Centre/Locality (UCL) and had an estimated population of 202 residents in 2016.

More than 97 per cent of Toomelah's residents and 56 per cent of residents in the Boggabilla SSC are Indigenous people with generally low social and financial resources. This indicates specific vulnerabilities to risk, and the opportunity to work with local communities to achieve sustainable change in their socio-economic circumstances. There are strong social connections between the Boggabilla and Toomelah communities. Indigenous people are generally under-represented in the ABS Census and a Toomelah community leader advised that the Toomelah population may be closer to 300 people.

Goondiwindi, the municipal centre of the Goondiwindi LGA (in Queensland) is approximately 15 km north west of the study area. Goondiwindi is 13 minutes' drive from Boggabilla, 26 minutes' drive from Toomelah and a 40-minute drive from North Star, and functions as the regional centre for these towns.

The populations and location of nearby communities as represented by state suburbs and the locality of Toomelah are shown in Table 13.

**Table 13**      **Nearby communities**

Community	Location	Population (2016)	Indigenous People (2016) (%)
<b>North Star SSC</b>	1.5 km south of study area	230	3.0
<b>Boggabilla SSC</b>	8.5 km west of study area	990	56.7
<b>Toomelah UCL</b>	2 km east of study area	202	98.5
<b>Goondiwindi SSC</b>	15 km northwest of study area	6,355	5.9

**Source:** Location distances estimated using google Maps. Population data sourced from ABS Census 2016.

#### **4.5.3**      **Proposal region**

The study area traverses the LGAs of Gwydir Shire and Moree Plains Shire. Approximately 18 km of the corridor is within the Gwydir LGA, and approximately 12.6 km is within the Moree Plains LGA.

Goondiwindi provides a range of higher order services to surrounding townships and rural production areas, and there is a high degree of collaboration between health and emergency services on either side of the NSW/QLD border. Along with the MPSC and GSC, the GRC has an interest in the proposal.

The Moree Plains, Gwydir and Goondiwindi Shire LGAs therefore represent the proposal's regional community of interest, or proposal region. The New England and North West Region is also considered as representative of the broader regional workforce that may benefit from proposal employment, and in relation to regional planning objectives.

Economic benefits are also likely at the State level, as discussed in detail in Appendix I: Economic assessment.

#### **4.5.4**      **Statistical geography**

The ABS Statistical Areas which correspond with the areas of influence are shown in Table 14.

The North Star and Boggabilla SSCs decreased in area between 2011 and 2016, so comparative population figures are indicative only for these two areas. The change in the North Star SSC was to create new State suburbs for Croppa Creek (to the south) and Boonal (to the north). As the proposal's alignment transects approximately 600 m of the Boonal SSC (which had a population of approximately 43 people in 2016), the limited demographic data available for Boonal are also provided in Section 5.2: Communities.

The change in the Boggabilla SSC was to exclude areas to the north and south of town, where the population density is very low. There have also been minor changes in the geographical extent of the three LGAs and the New England and North West SA4. Analysis of housing trend data is provided for postcodes including Goondiwindi (4390), Moree (2400), North Star (2408) and Boggabilla (2409).

**Table 14 Statistical geography**

Statistical Area	Area of social influence	Name	Land area (km <sup>2</sup> ) 2016	Land area (km <sup>2</sup> ) 2011
<b>Statistical Area 1 (SA1)</b>	Study area	SA1s as show in Figure 2		
<b>State Suburbs (SSC)</b>	Nearby communities	North Star	904.8	1,555.6
		Boggabilla	1,342.7	1,663.1
		Boonal	266.3	N/A
		Goondiwindi	830.3	832.3
<b>Urban Centre Localities (UCL)</b>		Toomelah	2.2	2.2
<b>Local Government Areas (LGA)</b>	Proposal region	Gwydir Shire (Gwydir LGA)	9,259.7	9262.4
		Moree Plains Shire (Moree Plains LGA)	17,906.5	17,906.5
		Goondiwindi Regional Council (Goondiwindi LGA)	19,292	19,255.5
<b>Statistical Area 4 (SA4)</b>	Broader region – workforce	New England and North West	99,145.9	99,144.9
<b>New South Wales</b>		New South Wales	800,810.8	800,810.8

## 5 Social environment

This section describes existing social indicators and values in the areas of influence, as the basis for understanding the proposal's potential social impacts and benefits.

### 5.1 Surroundings and property

#### 5.1.1 Aboriginal land

The Gomeroi People are the traditional custodians of the country in which the proposal is located. The Gomeroi People have an active native title claim which has been accepted as a registered claim by the Native Title Tribunal (NNTT) but has not yet been determined by the courts (NNTT, 2011).

Gomeroi connections to land were disrupted by pastoral settlement during the second half of the 19<sup>th</sup> century, but have been maintained, with many Gomeroi people living in the proposal region. After decades during which Gomeroi people were displaced from the area, some of them were removed to an Aboriginal Mission (along with Bigambul and Wirerai peoples) firstly in Euraba from 1912 and then too Old Toomelah in 1927, before moving to the current site on the banks of the Macintyre River in 1937 (Human Rights, 1988). Toomelah's current site was identified by Elders as the right place as it has some protection from flooding (as advised by a community leader in consultation).

Toomelah ceased to become a reserve in 1975 and since then, Toomelah has been self-managed. In 1984 the freehold land in and around Toomelah (184.9 hectares on which stood 40 houses, health clinic, primary school and sheds) was transferred to the Toomelah Boggabilla LALC. Subsequent land claims have increased the land area held by the LALC (Human Rights, 1988). The Human Rights Commission noted that the community had to come to terms with a vast array of new rights and responsibilities without adequate training. Community management strengths have grown considerably during the ensuing decades, however the lack of community-based employment and intergenerational welfare dependency mean that socio-economic conditions in Toomelah remain very poor.

Consultation for the SIA identified that remaining areas of native vegetation in the study area continue to be accessed and used for Indigenous cultural education, and for bush tucker and medicine resources.

#### 5.1.2 Land use and property ownership

Existing land uses within the study area other than the existing non-operational rail corridor are predominantly used for agricultural purposes, including grazing land, cropping land and grazing modified pastures. Agricultural production is the cornerstone of the region's economy and is the primary industry of employment across the proposal region.

Table 15 summarises land tenure in the study area. Detailed information on tenure and land use is provided in EIS Chapter 22: Land use and property.

The permanent disturbance footprint is predominantly located within existing railway and road corridors, where there is no defined lot or tenure. The existing non-operational Boggabilla rail corridor is dedicated railway land, identified by the NSW Digital Cadastral Database as a 'railway corridor' and including public roads in use, undefined roads, private roads and proposed roads.

Properties outside of the existing Boggabilla rail and road corridors that are traversed by the permanent disturbance footprint include freehold land, one parcel of NSW Government tenure, one parcel of unknown tenure, four parcels of Crown land used for travelling stock use, and one parcel of Crown land used for irrigated cropping. Approximately 103.6 hectares (ha) of land within the temporary disturbance footprint and 60.1 ha of land within the permanent disturbance footprint is freehold land.

While much of the study area is heavily modified by grazing and cropping land, there are significant environmental and cultural values attributed to riparian vegetation of the Macintyre River in the northern greenfield section (refer EIS Chapter 11: Biodiversity).

The visual character is predominantly rural, with agricultural activities dominating the landscape. Other dominant landscape features include the existing non-operational rail line, North Star Road, Bruxner Way and Tucka Tucka Road.

**Table 15 Tenure within the permanent and temporary disturbance footprints**

Land tenure	Land use and tenure study area			
	Area within permanent disturbance footprint (ha)	% of land within permanent disturbance footprint	Area within temporary disturbance footprint (ha)	% of land within temporary disturbance footprint
<b>Railway corridor</b>	118.51	42.2	0.25	0.2
<b>Road corridor</b>	93.67	33.4	11.55	7.9
<b>Freehold</b>	60.10	21.4	103.63	70.5
<b>Unknown</b>	3.59	1.3	4.86	3.3
<b>Crown</b>	3.32	1.2	26.22	17.8
<b>NSW Government</b>	1.38	0.5	0.02	Less than 0.1
<b>Watercourse</b>	0.25	0.1	0.56	0.4
<b>Total</b>	280.83	100.0	147.08	100.0

Source: EIS Chapter 22: Land use and property

### 5.1.3 Nearby communities

Figure 1 shows the proposal in the context of nearby communities. The southernmost extent of the proposal starts approximately 1.5 km north of North Star. Boggabilla is approximately 8.5 km west to northwest of the proposal and Toomelah is approximately 2 km to the east. Goondiwindi is approximately 17 km to the northwest of the proposal's northern extent.

#### North Star

North Star is a small rural town in the Gwydir LGA, located 43 km south of Goondiwindi and 80 km northeast of Moree. In 2016, the North Star SSC had a residential population of 230 people, of whom approximately 50 people live in town.

North Star was founded on grazing and agriculture which remain the mainstay of local employment. The opening of the Boggabilla Railway Line in 1932 contributed to the growth of the town with the establishment of new services including the North Star Post Office.

North Star functions as a local centre for a small number of local residents and surrounding farmers. Services include the North Star Primary School, North Star Sporting Ground, and the North Star Tourist Park. An Australia Post office opens on weekday mornings, but the North Star General Store is currently closed. Consultation with local residents, GSC and emergency service providers indicated that North Star has become an increasingly isolated locality, noting the closure of the general store and limited local services. Anecdotal feedback suggests the public amenities and playground located on North Star Road increase the town's potential as a short break site for truck drivers and travelling families, however visitor activity is limited outside the large-scale organised events held in town.

## **Boggabilla**

Boggabilla is a small town (with a population of 551 people in 2016) within Moree Plains LGA, located immediately southwest of the Macintyre River approximately 10 km southeast of Goondiwindi and relying heavily on Goondiwindi for higher order services. Boggabilla's development was based on grazing in the region and the extension of the railway to Boggabilla in the 1880s. The heritage listed Boggabilla Courthouse dates to 1896 (OEH, 2018).

The residential population of Boggabilla SSC in 2016 was 990 people. More than half (56.7 per cent) of the residential population are of Aboriginal or Torres Strait Islander descent. The fertile soil around Boggabilla is farmed for cotton, broadacre crops, sheep and beef cattle, providing employment for some local people, with others commuting to Goondiwindi for work.

Boggabilla has a basic range of local services that cater for the town's population and also service Toomelah, including a Boggabilla Central School (prep to year 12) co-located with a needs-based TAFE, as well as a community health service, police station, and postal services maintained through the operators of the local town and country club, and the Wobbly Boot Hotel which consultation participants identified as a traditional stopping and meeting place for locals and travellers.

## **Toomelah**

Toomelah is located 13 km southeast of Boggabilla and 21 km southeast of Goondiwindi and is within the Moree Plains LGA. Toomelah is an Aboriginal community which had a population of approximately 200 people in 2016 according to the ABS Census.

Toomelah's facilities include the Toomelah Primary School, Toomelah Health Centre, and a large new community centre (completed in June 2018 by the Australian Defence Force). Toomelah has strong links to Boggabilla and Goondiwindi and relies on these centres for the provision of other community services, shopping and professional services.

The ABS estimate that the Census may have undercounted the Australian Indigenous population by 17.5 per cent (ABS, 2016a) so the populations of Boggabilla and Toomelah may be higher than the Census indicated.

## **Goondiwindi**

Goondiwindi was gazetted as a municipality in 1888 and served as a border crossing between Queensland and New South Wales. The historic growth of Goondiwindi was largely driven by surrounding agricultural production, which continues to be the cornerstone of the regional economy. In 2016, the State suburb (town) of Goondiwindi had a population of approximately 6,355 people.

Goondiwindi is the primary economic hub for the GRC LGA and the communities of Boggabilla and Toomelah, providing a range of higher order services to surrounding townships and rural production areas.

Goondiwindi provides a range of critical social infrastructure services and facilities to the wider region including emergency (police, ambulance, fire and rescue services) and health services including the Goondiwindi Hospital and general practitioners.

#### **5.1.4 Regional settlement**

##### **Moree Plains Local Government Area**

Moree Plains Shire is a large rural shire at 17,906 km<sup>2</sup> and with a population of approximately 13,159 people in 2016. The LGA's northern border is located adjacent to the border between New South Wales and Queensland. The LGA is on the crossroads of the Newell, Gwydir and Carnarvon Highways. The municipal centre is Moree, located approximately 80 km south west of the proposal corridor. Other towns and villages in the LGA include Toomelah, Ashley, Boomi, Boggabilla, Garah, Gurley, Mungindi, Pallamallawa and Weemelah.

Agriculture is the mainstay of the Moree Plains economy with highly productive agricultural land, producing wheat, barley, sorghum, pluses, cotton, maize, beef, sheep, wool, olives, pecans and canola (RDA Northern Inland NSW, 2016).

Tourism is an important part of the LGA's economic diversification, with key attractions including:

- Moree Artesian Aquatics Centre (MAAC), established in 1896, which has recently undergone a \$7 million redevelopment
- the Big Rocket which includes a 14 m rocket and a space themed command centre playground is another key local attraction
- The Moree Water Park being developed by MPSC to provide community water-based recreational and sports activities.

RDA Northern Inland NSW (2016, Ibid) notes that there are several opportunities to diversify the regional economy, many of which 'hinge around improved road-rail transport and the potential offered from the proposed Inland Rail Link.' Council identifies opportunities as including significant scope for reducing rail-freight costs, the need for larger loading facilities, road to rail coordination with road upgrades providing access to loading facilities, container transport by rail which 'would expand the scope for containerised local processing and value-adding opportunities such as blended grains' and. increase investment potential for secondary processing, and development of supply relationships with North Asia.

##### **Gwydir Local Government Area**

Gwydir Shire is a rural shire in NSW, with a land area of 9,260 km<sup>2</sup> and a population of approximately 5,258 people in 2016. The LGA is on the crossroads of the Gwydir Highway, which links the NSW North Coast to Outback NSW, and Fossickers Way, a north-south touring route. The Bruxner Way traverses the northern edge of the LGA.

Gwydir LGA is part of the New England – North West Region (also known as the Northern Inland Region) and is bounded by the Tamworth LGA to the south, Narrabri LGA to the southwest, Moree Plains LGA to the west, Inverell Shire to the east, and Armidale Regional Council and Uralla Shire to the southeast.

The largest towns are Wyallda (approximately 85 km south of the study area) which services the northern part of the LGA, and Bingara (approximately 125 km south of the study area which services the southern part of the LGA (GSC, 2017). North Star is one of the Gwydir LGA's five rural villages, which also include Croppa Creek, Coolatai and Gravesend in the LGA's north, and Upper Horton in the south.



Gwydir LGA's key industries are cattle and sheep studs, livestock production (prime beef, lamb and pork) in the southern and central areas of the Shire, and broadacre cropping in the northern part of the Shire, with the main crops including wheat, sorghum, barley, include cotton, other grains, hay and pasture seed, and oilseeds (GSC, 2017).

Community priorities identified as part of Gwydir Shire's Economic Development Strategy 2017-2020 (Jenny Rand & Associates for GSC, 2017) included growing the Shire's population to increase the viability of local businesses, diversify the Shire's economy to reduce the dependence on broadacre cropping and livestock grazing agriculture, and growing the tourism and manufacturing/processing sectors. Key tourism attractions include the townships of Bingara and Warialda, the Copeton Waters State Park, Gwydir River, Roxy Theatre in Bingara, Cranky Rock Reserve, Three Creeks Gold Mine, the Myall Creek Memorial Site and the Rocky Creek Glacial Area (GSC, 2017).

### **Goondiwindi Local Government Area**

The Goondiwindi LGA is a rural region in the west of Queensland's Darling Downs region, adjoining the NSW/QLD border. The LGA has an area of 19,292 km<sup>2</sup> and had a population of 10,630 people in 2016. Goondiwindi LGA is bordered by the Queensland LGAs of Balonne to the west, Western Downs to the north, Toowoomba to the northeast, and Southern Downs to the east.

Prior to the 2008 amalgamation, the Goondiwindi Region included the LGAs of the Town of Goondiwindi, the Shire of Waggamba and the Shire of Inglewood. Key towns include Goondiwindi as the LGA's centre, Inglewood to the northeast and Texas to the east, with smaller towns including Yelarbon, Toobeah, Bungunya and Talwood. The Leichhardt, Cunningham, Newell, Gore and Barwon and Bruxner Way converge within the LGA.

Agriculture is the cornerstone of Goondiwindi's economy. By commodity value, approximately 16.8 per cent of Queensland's cereal crop production, 14.5 per cent of its wool production and 6.9 per cent of crops grown for hay originated from the LGA (Id.Profile, 2017).

Tourism is also important to the Goondiwindi LGA and is underpinned by its location on major touring roads highways (the Adventure Way, the Great Inland Way, Australia's Country Way, and the Leichhardt Highway), scenic landscapes, heritage values, community festivals and sporting events, and country hospitality (GRC, 2015).

#### **5.1.5 Road network**

The Newell Highway is the major state road that services the region and traverses the northern extent of the study area. The Newell Highway connects to the Cunningham Highway across the Queensland border at Goondiwindi.

Other major roads within the study area include:

- Bruxner Way which runs adjacent to the proposed rail alignment for approximately 4.6 km between Ch 21.0 km and Ch 25.6 km
- Tucka Tucka Road which runs southeast from Bruxner Way and is crossed by the corridor at Ch 30.0 km
- North Star Road which runs adjacent to the proposed rail alignment for approximately 18.8 km between Ch 1.0 km and Ch 19.8 km.



### 5.1.6 Special features

The proposal crosses the Macintyre River and numerous small ephemeral creeks, including approximately 19 km of floodplain. This area is generally flat with stands of vegetation along the riparian zone of the Macintyre River. The remainder of the floodplain has been cleared and modified for agriculture and water management.

Other waterways crossed by the proposal include Mobbindry Creek, Forest Creek, Back Creek and Whalan Creek. There are also several irrigation channels that convey pumped irrigation water from the Macintyre River to properties on the southern floodplain. The area has a long history of flooding with large flood events in 1896, 1976, 1996, 2011 and 2012 (ARTC, 2018).

While much of the proposal region is heavily modified by grazing and cropping land, there are significant environmental values attributed to riparian vegetation of the Macintyre River in the northern greenfield section of the alignment.

The nearest national park is Dhinna Dhinawan National Park which is located approximately 35 km west of the proposal region, within the Inverell LGA.

The key cultural features near the study area are landscapes and waterways which are culturally and socially significant to the Gomeroi people.

Except for agricultural infrastructure which underpins farming and agribusiness, there are no built features of social significance in the study area.

### 5.1.7 Other projects

Existing and proposed projects located in the vicinity of the proposal region are presented in Table 16, providing insight to future development and land use activities in the study area.

**Table 16 Other projects in the area**

Project and Proponent	Location	Description
B2G Inland Rail (ARTC)	NSW/QLD Border to Gowrie Junction, QLD	Approximately 146 km of new dual gauge track and 78 km of upgraded track from the NSW/QLD border, near Yelarbon, to Gowrie Junction.
Narrabri to North Star Inland Rail (ARTC)	Narrabri (NSW) to the North Star in NSW	An upgrade to approximately 188 km of track within the existing rail corridor and construction of approximately 1.6 km of new rail corridor.
Moree Solar Farm	10 km south of Moree, off the Newell Highway	Construction of a single axis tracking solar PV facility.
Newell Highway Upgrade, Moree and North Moree	Newell Highway, Narrabri to Moree and North Moree	Planning for up to 30.2 km of new road pavement, intersection improvements and widening of road shoulders.
Newell Highway upgrade Mungle Back Creek to Boggabilla	85 km north of Moree, Mungle Back Creek to Boggabilla	Major works to 18 km of new road pavement, 3.5 m wide lanes in each direction, intersection improvements, widening of road shoulders and provision of two new overtaking lanes.
Hunter Gas Pipeline	Newcastle to Narrabri	420 km gas pipeline to transport gas from the Narrabri Gas Project to Newcastle.
White Rock Wind Farm	20 km south-west of Glen Innes, 40 km east of Inverell	Stage 2 of White Rock Wind Farm will consist of up to 48 turbines, producing up to 202 megawatts (MW) of renewable electricity.

Project and Proponent	Location	Description
Sundown Solar Farm	South of Gwydir Hwy, 30 km east of Inverell	A large-scale solar photovoltaic generation facility, including battery storage and associated infrastructure, with an estimated maximum capacity of up to 600 MW.
Bonshaw Solar Farm	Bruxner Way, 16 km south of Bonshaw	A large scale solar photovoltaic generation facility and associated infrastructure with a capacity of 500 MW.
Sapphire Solar Farm	30 km east of Inverell	A 200 MW hybrid solar and battery power facility.
Fucheng Abattoir, Cunningham Highway	15 km east of Goondiwindi LGA	Abattoir expansion anticipated to process 1,000 head of cattle per day.
Kentucky Road Solar Farm	12 km north-west of Boggabilla	4.99 MW solar farm on rural land.

## 5.2 Communities

This section provides analysis of populations and community characteristics in local and regional communities. Data are provided for:

- The two SA1s traversed by the proposal
- North Star, Boggabilla, Toomelah, Boonal and Goondiwindi (nearby communities)
- The LGAs of Gwydir, Moree Plains and Goondiwindi (proposal region).

Of note, ABS make small random adjustments to all cell values to protect the confidentiality of data. These adjustments may cause the sum of rows or columns to differ by small amounts from table totals.

### 5.2.1 Study area

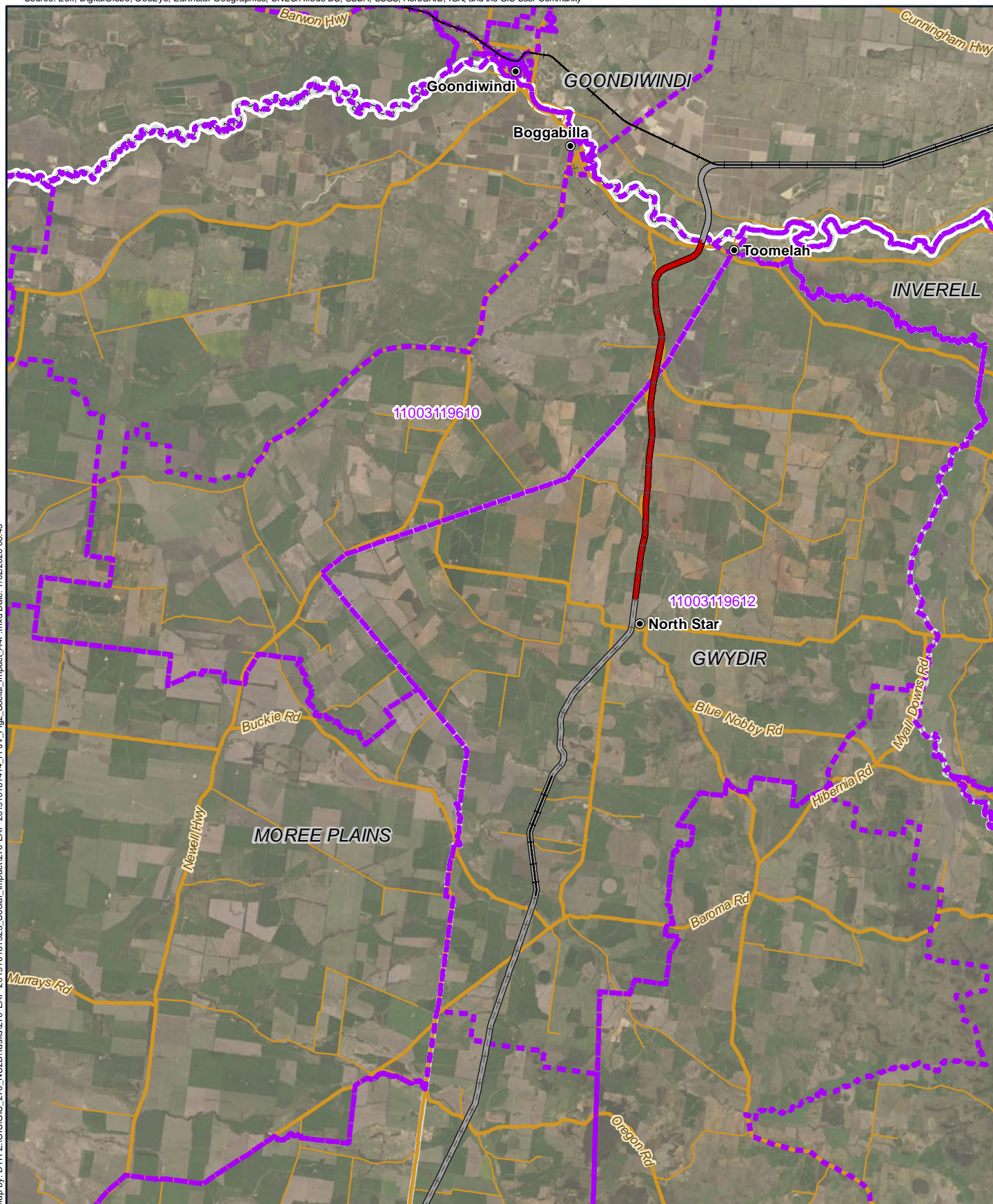
The two SA1s in which the study area is located (refer Figure 2) had a total population of 517 people (sparsely dispersed with just 0.14 persons per km<sup>2</sup>) and included 289 dwellings in 2016. The residential population of the two SA1s decreased by 13 people between 2011 and 2016.

Socio-Economic Indexes for Areas (SEIFA) are developed by the ABS, based on data from the five-yearly Census, to rank areas according to relative socio-economic advantage and disadvantage. (ABS 2016). SEIFA scores are compared to the standardised baseline (State) score of 1,000 with a low score indicating relatively greater disadvantage. SEIFA indices used in this report include:

- Index of Relative Socio-Economic Advantage and Disadvantage (IRSAD) (this section)
- Index of Education and Occupation (IEO) (Section 5.7).

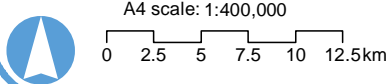
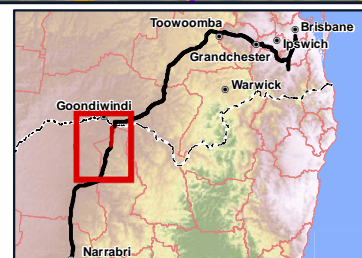
Table 17 shows key indicators for the SA1s crossed by the proposal. SEIFA IRSAD scores indicate that the population within SA1s in which the study area is located had higher scores (less potential for disadvantage) than the standardised NSW standardised baseline score. The northernmost SA1 was in the 7<sup>th</sup> IRSAD decile and the southern SA1 was in the 6<sup>th</sup> decile. This is likely a reflection of incomes and skilled employment derived from large agribusinesses in and near the study area. The extended drought is likely to have had a negative effect on households' financial resources and potentially labour force participation in the study area during the years since the Census, which may have increased the potential for disadvantage.





#### Legend

- Localities
- +— Existing rail (operational)
- Existing rail (non-operational)
- North Star to NSW/QLD border alignment
- Adjoining alignments
- Major roads
- Minor roads
- NSW/QLD border
- - - SA1 boundary
- Local Government Areas



**Table 17 Study area key indicators**

SA1	Area (km2)	Population 2011	Population 2016	Population density 2016 (people per km2)	No. dwellings 2016	SEIFA IRSAD 2016	
						Score	Decile
1119610 (NSW)	797.6	94	110	0.14	68	1051	7
1119612 (NSW)	1,553.5	423	394	0.14	221	1024	6
<b>Total</b>	<b>3,148.7</b>	<b>517</b>	<b>504</b>	<b>0.14</b>	<b>289</b>		

Source: ABS Census of Population and Housing 2011 and 2016.

### 5.2.2 Local and regional populations

Population data for nearby communities are provided for equivalent State Suburbs and the locality of Toomelah, which is within the Boggabilla State Suburb and influences the State Suburb's characteristics. Data are derived from the 2016 Census of Population and Housing 2016 unless otherwise referenced.

#### Population

The Gwydir LGA had a small population at 5,258 people compared to Moree Plains LGA (at 13,159 people) and Goondiwindi LGA (at 10,630 people) (refer Table 18).

North Star had a population of 230 people living in town or on surrounding rural properties. Together, North Star, Boonal and Croppa Creek had a population of 393 people in 2016 compared to North Star's 423 people in 2011, indicating a small population decrease had occurred in this area.

Toomelah had a population of 202 people in 2016, and Boggabilla had a population of 990 people. Goondiwindi is the largest centre in the proposal region with 6,335 people.

Between 2011 and 2016, Gwydir LGA experienced population growth of almost 6 per cent, while the Moree Plains LGA experienced a decrease of 2 per cent, and there was no change in Goondiwindi.

**Table 18 Population change 2011 to 2016**

Area	2016	2011	Change (no.)	Change (%)
<b>Gwydir LGA</b>	5,258	4,965	293	5.9
<b>Moree Plains LGA</b>	13,159	13,429	-270	-2.0
<b>Goondiwindi LGA</b>	10,630	10,628	2	0.02
<b>North Star*</b>	230	423	-193	-45.6
<b>Goondiwindi</b>	6,355	6,397	-42	0.66
<b>Boggabilla</b>	990	1,141	-151	-13.2
<b>Toomelah</b>	202	226	-24	-10.6
<b>Boonal</b>	43	N/A	N/A	N/A

\* Population change is indicative as the SSC area changed between 2011 and 2016.

Source: ABS Census of Population and Housing 2016 Time Series Profiles.

## Population growth

Table 19 outlines the respective State governments' population projections for the three LGAs. Gwydir and Moree Plains LGAs are expected to experience a very small population decline over the 20 years to 2036, by an average of approximately 1 per cent per annum in the Gwydir and Moree Plains LGAs. The Goondiwindi LGA is expected to experience an average population decrease of approximately 0.2 per cent per annum until 2036.

**Table 19 Population Projections 2016 to 2036**

LGA	2016	2021	2026	2031	2036	(no.)	Ann. Av.
<b>Gwydir</b>	5,000	4,800	4,550	4,300	4,000	-1,100	-1.1%
<b>Moree Plains</b>	13,750	13,250	12,650	11,950	11,100	-2,950	-1.0%
<b>Goondiwindi</b>	11,062	11,137	11,243	11,356	11,474	-412	-0.2%

Source: NSW Government Population Projections – Main Series, QLD Government Population Projections, 2015 edition (medium series).

## Indigenous population

The community of Toomelah had a residential population of 202 people in 2016, of whom 97 per cent were Indigenous (all Aboriginal descent) (refer Table 20). Boggabilla also has a significant Indigenous population at 545 people, of whom 532 were of Aboriginal descent and 12 were of Aboriginal and Torres Strait Island descent, accounting for over half of Boggabilla's population. Each of the LGAs had higher percentages of Indigenous people than the NSW average, with Moree's Indigenous population substantially larger than the other two LGAs at 2,845 people (21.6 per cent).

**Table 20 Indigenous population percentage 2016**

Area	Number	% Indigenous
<b>Moree Plains LGA</b>	2,845	21.6
<b>Goondiwindi LGA</b>	574	5.4
<b>Gwydir LGA</b>	300	5.7
<b>North Star</b>	7	3.0
<b>Boggabilla</b>	556	56.7
<b>Boonal</b>	N/A	N/A
<b>Goondiwindi</b>	375	5.9
<b>Toomelah</b>	195	97.0
<b>NSW</b>	216,176	2.9

Source: ABS Census 2016 Community Profiles.

## 5.2.1 Families and households

### Family types

Table 21 provides an outline of the family and household characteristics at the 2016 Census. There is a high proportion of couple family households with no children across the area of interest except for Boggabilla SSC and Toomelah. A total of 71.2 per cent of family households in Toomelah are sole parent families compared to 16 per cent for NSW.



**Table 21 Family and household characteristics percentages 2016**

Area	Family households			Household type		
	Couple	Couple with children	Sole parent families	Family households	Sole person households	Group and other households
<b>Gwydir LGA</b>	50.7	34.5	13.6	68.0	29.7	2.3
<b>Moree Plains LGA</b>	37.1	38.4	21.8	67.7	29.5	2.8
<b>Goondiwindi LGA</b>	44.6	40.3	13.6	70.0	27.3	2.8
<b>North Star</b>	46.4	48.2	5.4	70.6	25.9	3.5
<b>Boggabilla</b>	24.6	35.7	35.7	73.3	23.5	3.2
<b>Boonal</b>	33.3	33.3	33.3	60.0	40.0	0
<b>Goondiwindi</b>	41.8	42.6	14.2	71.2	25.6	3.3
<b>Toomelah</b>	0	21.2	71.2	78.3	21.7	0.0
<b>NSW</b>	36.6	45.7	16.0	72.0	23.8	4.2

## 5.2.2 Demographic characteristics

### Gender

The three LGAs recorded a similar gender breakdown in 2016 with marginally more males than females. Boonal and North Star recorded higher percentages of males at 61.7 per cent and 54.1 per cent of the population respectively (refer Table 22).

**Table 22 Gender, 2016**

Area	Male %	Female%
<b>Gwydir LGA</b>	50.6	49.4
<b>Moree Plains LGA</b>	50.4	49.6
<b>Goondiwindi LGA</b>	50.2	49.8
<b>North Star</b>	54.1	45.9
<b>Goondiwindi</b>	49.3	50.7
<b>Boggabilla</b>	49.3	50.7
<b>Boonal</b>	61.7	38.3
<b>Toomelah</b>	46.2	53.8
<b>NSW</b>	49.3	50.7

Source: ABS Census 2016 Community Profiles

### Age

It is evident that the communities are characterised by an ageing population with median ages increasing by one to three years across the communities (refer Table 23).

Gwydir LGA had a considerably higher median age than the other LGAs (at 48 years) indicating there may be less capacity to cope with change related to the proposal. Toomelah's median age was low at 21 years in 2016, which is typical of Aboriginal communities and highlights the need to maintain a healthy and safe environment, along with employment opportunities, in the Toomelah area. Boggabilla's population was younger than other areas apart from Toomelah, largely because of the younger age of the Aboriginal community.

**Table 23 Change in median age 2011 to 2016**

Area	2011	2016	Change (no.)
<b>Gwydir LGA</b>	45	48	3
<b>Moree Plains LGA</b>	35	38	3
<b>Goondiwindi LGA</b>	38	40	2
<b>North Star</b>	34	36	2
<b>Goondiwindi</b>	35	36	1
<b>Boggabilla</b>	31	34	3
<b>Boonal</b>	NA	39	NA
<b>Toomelah</b>	18	21	3
<b>NSW</b>	38	38	0

Source: ABS 2011 and 2016 Census of Population and Housing – QuickStats.

Table 24 shows the percentages of age groups which are potentially vulnerable to changes in the social environment, including such as children, young people and seniors. Gwydir LGA had a higher proportion of the population aged over 65 years (24.6 per cent), which highlights the ageing population of the Shire. Over 50 per cent of the Toomelah population are 24 years or younger compared to 33.5 per cent for NSW. All statistical areas of interest except for Gwydir had a higher proportion of the population less than 16 years of age compared to the NSW average.

**Table 24 Selected age groups**

Area	<16 years %	16-24 years %	>65 years %
<b>Gwydir LGA</b>	21.6	8.3	24.6
<b>Moree Plains LGA</b>	25.6	10.3	14.2
<b>Goondiwindi LGA</b>	25.0	9.4	16.5
<b>North Star</b>	25.6	12.1	4.8
<b>Goondiwindi</b>	26.4	10.3	14.3
<b>Boggabilla</b>	32.0	13.8	8.3
<b>Boonal</b>	N/A	N/A	N/A
<b>Toomelah</b>	31.1	20.8	2.0
<b>NSW</b>	22.1	11.4	15.2

Source: ABS Census 2016 Community Profiles.

## Disability

Table 25 indicates the percentage and number of people requiring assistance with daily tasks as a result of a disability. Gwydir LGA had a higher percentage of people requiring assistance (7.0 per cent), compared to NSW (5.4 per cent). The other LGAs and nearby communities recorded lower percentages of people who required assistance. The higher percentage requiring assistance in Gwydir is likely attributed to a higher proportion of senior residents.

**Table 25 Core Disability (need for assistance), 2016**

Area	Has need for assistance	
	No.	% of population
<b>Gwydir LGA</b>	369	7.0
<b>Moree Plains LGA</b>	565	4.3
<b>Goondiwindi LGA</b>	490	4.6
<b>North Star SSC</b>	3	1.3
<b>Goondiwindi</b>	262	4.1
<b>Boggabilla</b>	36	3.6
<b>Boonal</b>	0	0
<b>Toomelah</b>	8	4.0
<b>NSW</b>	402,048	5.4

Source: ABS Census 2016 Community Profiles.

## Educational attainment

High school completion rates are shown in Table 26. The percentages of people who had completed Year 12 or its equivalent was lower than State averages. High school completion was particularly low in Boggabilla (9.9 per cent) and Toomelah (5.9 per cent).

**Table 26 Highest year of school completed 2016**

Area	Year 9 or below (%)	Year 10 or equiv. (%)	Year 11 or equiv. (%)	Year 12 or equiv. (%)	Did not go (%)	Not stated (%)
<b>Gwydir LGA</b>	15.2	18.9	4.2	10.8	0.2	17.3
<b>Moree Plains LGA</b>	12.4	17.1	4.5	11.5	0.5	19.0
<b>Goondiwindi LGA</b>	11.6	18.4	4.0	14.8	0.4	14.8
<b>North Star</b>	12.1	14.4	4.6	13.2	0.0	17.2
<b>Boggabilla</b>	19.8	18.7	6.7	9.9	1.5	20.4
<b>Goondiwindi</b>	9.5	16.7	4.3	16.2	0.3	15.0
<b>Boonal</b>	0.0	9.1	0.0	48.5	0.0	18.2
<b>Toomelah</b>	35.6	22.0	11.9	5.9	3.4	12.7
<b>NSW</b>	5.50	21.30	4.90	53.90	1.10	8.80%

Source: ABS Census 2016 Community Profiles



Goondiwindi (town) had the highest proportion of persons with a qualification across the communities of interest (43.7 per cent) but this was lower than the NSW average (47.2 per cent). Toomelah recorded a low proportion of the population with qualifications (13.6 per cent), however consultation with the Toomelah community indicates that several residents have trade or certificate qualifications. Boggabilla also had lower levels of qualifications at 22.3 per cent. As is typical of rural areas, all areas of social influence had lower levels of tertiary qualifications than the NSW average (refer Table 27).

**Table 27 Non-School qualifications 2016**

Area	Degree		Diploma/ Advanced diploma		Certificate		Persons with a qualification		Total 15yrs+
	No.	%	No.	%	No.	%	No.	%	No.
<b>Gwydir LGA</b>	374	8.7	289	6.7	677	15.6	1,340	32.0	4,193
<b>Moree Plains LGA</b>	1043	10.2	657	6.4	1,647	8.9	3,347	33.4	10,025
<b>Goondiwindi LGA</b>	878	10.5	589	7.1	1,370	16.4	2,837	34.7	8,185
<b>North Star</b>	21	12.1	17	9.8	18	10.3	56	34.4	163
<b>Boggabilla</b>	55	7.5	31	4.2	76	10.3	162	22.3	727
<b>Boonal</b>	4	9.3	3	7.0	0	0	7	16.3	43
<b>Goondiwindi</b>	584	11.9	333	6.8	870	17.9	2,120	43.7	4,847
<b>Toomelah</b>	3	2.5	3	2.5	11	9.3	17	13.6	125
<b>NSW</b>	1,424,716	23.4	543,142	8.9	903,919	14.9	2,871,777	47.2	3,710,095

Source: ABS Census 2016 Community Profiles.

### 5.2.3 Income and disadvantage

The selected medians provided in Table 28 indicate that the Gwydir LGA has lower median weekly incomes (personal and household) than the other LGAs, while Goondiwindi and Moree Plains had median personal incomes similar to the State average, however weekly household incomes were lower than the State median.

Median incomes in Toomelah was less than half the State averages at \$328/week for personal incomes and \$687 for household incomes. Whilst rents in Toomelah were low at a median of \$100/week (correlated to the LALC's housing policy), this is evidence of severely constrained financial resources due to high unemployment and a lack of local business opportunities. Median rental payments in other local communities and the LGAs were low compared to the State median, and highest in Goondiwindi at \$250.00/week in 2016. Mortgage repayments were also considerably lower than the State average (as is typical of rural areas), and lowest in North Star (\$309/month).

**Table 28 Median income, mortgage repayments and rent 2016**

Area	Median personal income (\$)	Median weekly household income (\$)	Median mortgage repayment (\$/monthly)	Median rent (\$/weekly)
<b>Gwydir LGA</b>	489	910	981	120
<b>Moree Plains LGA</b>	669	1,240	1,300	170
<b>Goondiwindi LGA</b>	653	1,212	1,300	200
<b>North Star</b>	758	1,297	309	0
<b>Boggabilla</b>	379	919	800	120
<b>Goondiwindi</b>	730	1,391	1,517	250
<b>Boonal</b>	712	1,041	Not available	Not available
<b>Toomelah</b>	328	687	Not applicable	100
<b>NSW</b>	664	1,486	1,986	380

Source: ABS Census 2016 Community Profiles.

### Relative socio-economic advantage and disadvantage

The SEIFA scores for the three relevant LGAs rank within the bottom 50 percentile of Australia (refer Table 29) indicating that communities in the proposal region, except for North Star, have a higher potential of socio-economic disadvantage compared too other LGAs in Australia. At the local level, Boggabilla's score indicates a very high potential for disadvantage, whilst North Star's score indicates low potential for disadvantage.

A SEIFA score for the urban locality of Toomelah was not available but it would be safe to assume it would be like or less than Boggabilla's score and it is known that disadvantage in Toomelah is very high. Consultation identified high levels of unemployment as a central, contributing factor to many other complex social issues identified within the Toomelah community.

**Table 29 Socio-economic advantage and disadvantage (IRSAD)**

Area	Score	Rank (decile)	Rank (percentile)
<b>Gwydir LGA</b>	936	4	33
<b>Moree Plains LGA</b>	919	3	22
<b>Goondiwindi LGA</b>	957	5	48
<b>Boggabilla</b>	756	1	3
<b>North Star</b>	1023	7	64

Source: ABS 2016 Socio-economic indexes for areas (2016).

### Internet access

The proposal region has a lower proportion of households that do not have internet accessed from dwellings compared to NSW (refer Table 30). Rates were particularly low in Toomelah and Boggabilla. This is important when considering how information is disseminated to local communities. Consultation with local stakeholders identified no mobile phone coverage in Toomelah, and limited access across the study area with implications communications, service access and emergency response.

**Table 30 Internet access from dwellings 2016**

Area	Internet not accessed from dwelling	Internet accessed from dwelling	Not stated
Gwydir LGA	31.9	64.1	4.0
Moree Plains LGA	28.4	66.3	5.4
Goondiwindi LGA	24.2	72.7	3.2
North Star	26.2	65.0	8.8
Boggabilla	44.2	52.7	3.2
Boonal	0	100	0
Goondiwindi	21.2	75.5	3.3
Toomelah	73.1	26.9	
NSW	14.7	82.5	2.8

Source: ABS 2016 Census of Population and Housing.

#### 5.2.4 Travel behaviour

There are no passenger rail or bus services operating to any of the nearby communities. Buses operated by Crisp Coaches and Greyhound Australia service the proposal region.

##### Travel to work

A high proportion of employed people within the proposal region travelled to work via car as a driver or worked at home which largely reflects farming operations (refer to Table 31).

Notably, a significant proportion of employed persons from Toomelah walked to work (66.7 per cent). This reflects the low level of vehicle ownership within the indigenous locality and demonstrates the limitations on Toomelah residents' employment options.

**Table 31 Methods of travel to work for employed persons 2016**

Area	Car, as driver (%)	Worked at home (%)	Walker only (%)	Car, as passenger (%)	Truck (%)	Motorbike/scooter (%)	Bus (%)	Bicycle (%)	Taxi (%)	Other (%)	Did not go to work (%)	Method of travel not stated (%)
<b>Gwydir LGA</b>	54.6	18.7	7.9	2.9	3.0	0.8	0.4	0.3	0	2.0	8.1	1.3
<b>Moree Plains LGA</b>	67.1	8.2	6.0	5.0	2.0	0.4	0.1	0.4	0.2	1.3	7.6	1.4
<b>Goondiwindi LGA</b>	64.9	10.7	5.9	4.4	1.4	0.5	0.2	0.7	0.2	1.7	8.0	1.4
<b>North Star</b>	51.7	24.1	12.1	2.6	2.6	0	0	0	0	2.6	3.4	2.6
<b>Boggabilla</b>	63.5	9.6	9.2	4.0	3.2	1.6	0	0	0	1.2	8.4	1.2
<b>Boonal</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Goondiwindi</b>	71.1	5.3	4.1	4.9	1.2	0.4	0.1	1.0	0.3	1.1	8.5	1.6
<b>Toomelah</b>	33.3	0	66.7	0	0	0	0	0	0	0	0	0
<b>NSW</b>	57.8	4.8	3.9	4.3	1.0	0.6	4.0	0.7	0.2	5.3	8.7	1.0

**Source:** ABS Census 2016. Note: NSW travel to work includes ferry and train travel (not shown) which are not relevant to the proposal region.

## Vehicle ownership

Vehicle ownership across the proposal region is statistically like that of vehicle ownership across NSW with most households having one or two motor vehicles (refer Table 32). Percentages of households with no vehicle were high in Boggabilla at 17.4 per cent and very high in Toomelah at 56.5 per cent of dwellings, leaving community members highly dependent on walking, bikes and shared vehicles. Consultation with local stakeholder identified that community travel arrangements between Toomelah, Boggabilla and Goondiwindi relied on private vehicle or car sharing arrangements, with all school transport to Toomelah occurring by bus, and limited pedestrian (walking, cycling) access outside 1 to 2 km of each locality. However, usage and travel along the Macintyre River was identified as extending as far as 5 to 10 km east and west of Toomelah.

**Table 32 Registered motor vehicles per occupied private dwelling 2016 (% of dwellings)**

Area	None	1 motor vehicle	2 motor vehicles	3 or more vehicles	Not stated
Gwydir LGA	5.3	31.0	33.4	25.6	4.7
Moree Plains LGA	8.2	31.4	34.2	19.2	7.1
Goondiwindi LGA	4.4	29.7	38.1	23.1	4.7
North Star	3.8	22.8	35.4	32.9	5.1
Boggabilla	17.4	37.6	28.4	14.2	2.5
Boonal	N/A	N/A	N/A	N/A	N/A
Goondiwindi	4.8	31.0	38.2	21.4	4.7
Toomelah	56.5	26.1	17.4	0.0	0.0
NSW	9.2	36.3	34.1	16.7	3.7

Source: ABS 2016 Census of Population and Housing.

## Key transport networks

The Newell Highway and Bruxner Way form the key transport spine for the region within NSW. The Bruxner Way connects with the Newell Highway at Boggabilla and runs north to Goondiwindi. The Cunningham Highway is also an important eastern connection from Goondiwindi to other key regional centres including Warwick and Toowoomba. Other significant roads in the proposal region include North Star Road, which passes through the township of North Star and runs alongside the proposed alignment for approximately 20 km, and I B Bore Road which is unsealed but connects North Star to Newell Highway.

## Key activity centres

Goondiwindi is the primary activity centre within the proposal region. Other smaller townships within the vicinity that provide a limited range of services to local residents include Boggabilla, North Star and Toomelah.

## 5.3 Housing and accommodation

This section describes the type, cost and availability of housing in the proposal region.

### 5.3.1 Housing access

#### Housing type

As is typical of rural areas, most occupied private dwellings within the local communities and the Gwydir LGA are separate houses. Housing stock in Toomelah (100 per cent), Boggabilla (92.2 per cent) and North Star (96.2 per cent) was almost exclusively separate houses, whilst Goondiwindi (town), Moree Plains LGA and Goondiwindi LHA had a slightly more diverse housing mix (refer Table 33).

Occupancy of private dwellings across the proposal region was low compared to NSW, except for Toomelah, Goondiwindi and North Star which have occupancy rates over 90 per cent. North Star has a high percentage of unoccupied private dwellings (38.6 per cent) compared to the other statistical areas of interest (refer Table 34). These reflect a combination of second and third dwellings on rural properties which are used occasionally (e.g. for contract workers) or are vacant properties. Consultation with GSC identified that some property owners may welcome the opportunity to offer vacant houses as temporary accommodation options for workers associated with the proposal.

Toomelah's occupancy rate was higher than the State average and reflects the potential for overcrowding. Consultation with local stakeholders noted that housing characteristics in Toomelah have evolved since the mission's initial establishment. Some historic examples of small single-quarter style cabin housing remain within the community, in combination with larger housing structures, many in poor condition and with visible damage.

**Table 33 Dwelling structure of occupied private dwellings 2016 (% of total dwellings)**

Area	Separate house	Semi-detached, row or terrace house, townhouse etc.	Flat or apartment	Other dwelling
<b>Gwydir LGA</b>	95.5	1.0	1.3	1.9
<b>Moree Plains LGA</b>	82.9	5.3	9.6	1.8
<b>Goondiwindi LGA</b>	88.3	2.1	6.2	1.9
<b>North Star</b>	96.2	0.0	0.0	3.8
<b>Boggabilla</b>	97.2	0.0	2.8	0.0
<b>Boonal</b>	N/A	N/A	N/A	N/A
<b>Goondiwindi</b>	85.9	2.5	10.3	0.8
<b>Toomelah</b>	100	0	0	0
<b>NSW</b>	66.4	12.2	19.9	0.9

Source: ABS 2016 Census of Population and Housing.



**Table 34      Occupancy rates of private dwellings 2016 (percentage)**

Area	Occupied private dwellings	Unoccupied private dwellings
<b>Gwydir LGA</b>	84.6	15.4
<b>Moree Plains LGA</b>	84.9	15.1
<b>Goondiwindi LGA</b>	85.9	14.1
<b>North Star</b>	61.4	38.6
<b>Boggabilla</b>	87.3	12.7
<b>Boonal</b>	N/A	N/A
<b>Goondiwindi</b>	90.9	9.1
<b>Toomelah</b>	93.9	6.1
<b>NSW</b>	90.1	9.9

Source: ABS 2016 Census of Population and Housing.

### Housing tenure

There is a high proportion of private dwellings being rented in the proposal region compared to NSW with only Gwydir LGA recording lower levels of private dwelling rentals (refer Table 35). The Toomelah Boggabilla LALC manages the provision of community housing within Toomelah which reflects the 100 per cent rental figure for the locality.

**Table 35      Tenure of occupied private dwellings 2016 (% of dwellings)**

Area	Owned Outright	Owned with a mortgage	Rented	Other tenure type	Tenure not stated
<b>Gwydir LGA</b>	48.1	21.3	25.5	1.5	3.7
<b>Moree Plains LGA</b>	28.5	24.2	40.7	1.4	5.2
<b>Goondiwindi LGA</b>	34.1	26.1	35.2	1.2	3.4
<b>North Star</b>	28.0	13.4	50.0	3.7	4.9
<b>Boggabilla</b>	27.4	10.2	59.6	1.1	1.8
<b>Boonal</b>	25.0	25.0	50.0	0	0
<b>Goondiwindi</b>	28.7	30.5	36.9	0.6	3.3
<b>Toomelah</b>	0	0	100.0	0	0
<b>NSW</b>	32.2	32.3	31.8	0.9	2.8

Source: ABS 2016 Census of Population and Housing.

### Social housing and homelessness

Moree Plains LGA had a high proportion social housing (10.1 per cent) compared to the proportion for NSW (4.7 per cent). Gwydir and Goondiwindi LGAs had a lower proportion of social housing compared to the NSW figure with 1.3 per cent and 2.9 per cent respectively (refer Table 36).

Housing in the community of Toomelah is entirely made of community owned rentals administered by the Toomelah Boggabilla LALC whilst Boggabilla SSC's dwelling stock also has a high proportion of social housing (30.5 per cent) which comprised 71 community housing provided rentals and 16 dwellings administered by the State housing authority. Local social infrastructure providers described Boggabilla as experiencing a 'housing crisis', with a high percentage of social housing in poor or uninhabitable condition. The proposal was identified as a potential opportunity to increase private occupancy in Boggabilla and stimulate investment to improve social housing conditions and general appearance.

**Table 36 Social Housing, 2016 – Number and percentage**

Area	Total Dwellings	Total Social Housing		
	No.	No. State housing authority	No. Community/ Church owned rentals	% Total Dwellings
<b>Gwydir LGA</b>	1,987	14	12	1.3
<b>Moree Plains LGA</b>	4,545	305	155	10.1
<b>Goondiwindi LGA</b>	3,793	97	12	2.9
<b>North Star</b>	78	0	0	0
<b>Boggabilla</b>	285	16	71	30.5
<b>Boonal</b>	13	0	0	0
<b>Goondiwindi</b>	2,213	72	7	3.5
<b>Toomelah</b>	46	0	46	100
<b>NSW</b>	2,604,314	104,902	17,414	4.7

The estimated rate of homelessness across the three subject LGAs and two SA2s increased between the 2011 and 2016 census dates. Moree Plains LGA (0.97 per cent) and Moree Region SA2 (1.21 per cent) had higher rates of estimated homelessness compared to NSW (0.5 per cent). Gwydir and Goondiwindi LGAs had lower rates of estimated homelessness compared to the NSW figure with 0.25 per cent and 0.28 per cent respectively (refer Table 37).

**Table 37 Estimated homelessness, 2011 and 2016**

Area	Persons		Change	Proportion of total population 2016
	2011	2016	No.	%
<b>Gwydir LGA</b>	8	13	5	0.25
<b>Moree Plains LGA</b>	100	127	27	0.97
<b>Goondiwindi LGA</b>	18	30	12	0.28
<b>Moree Region SA2</b>	25	66	41	1.21
<b>Goondiwindi SA2</b>	8	20	12	0.31
<b>NSW</b>	28,194	37,692	9,498	0.50

Source: ABS Census of Population and Housing: Estimating homelessness 2011, 2016.

### 5.3.2 Housing trends

#### Purchase availability and prices

The proposal region is typical of a rural residential property market with a low turnover of residential properties. Analysis of housing data is provided for postcodes including Goondiwindi (4390), Moree (2400), North Star (2408) and Boggabilla (2409).

High volatility (changes in median prices) is apparent across the proposal region which is likely due to large price differentials and limited listings within a small (rural) sales market.

Goondiwindi (4390) recorded the highest median house price of the three postcodes with a median value of \$385,600 as at 25 September 2018 (refer Table 38). The median house price in Goondiwindi increased by 2.0 per cent in the last year but decreased by 5.4 per cent over the last three years.

North Star (2408) recorded a median house price of \$205,000 as at 25 September 2018 and Boggabilla (2409) recorded a median house price of \$115,000. The median dwelling prices of both postcodes decreased over the last year by -29.3 per cent and -11.3 per cent respectively, but based on limited sales.

Gwydir LGA had a median house price of \$149,687 as at September 2018 whilst Goondiwindi LGA recorded a median house price of \$264,680 as at June 2017. No median house price data was found for Moree Plains LGA, however, Moree (2400) recorded a median house price of \$271,700 as at 25 September 2018.

There were 97 properties listed for sale in Goondiwindi (4390) as at 28 September 2018 and four properties listed for sale in Boggabilla (2409) (Domain listings, 2018). There were no properties listed for sale in North Star.

Goondiwindi (4390) was the only area with enough units to record a median price of \$280,100 (as at 25 September 2018) which had decreased by 19.2 per cent over the previous 12 months (noting that this is based on a small sample of units) (SQM Research, 2018).

**Table 38 Median dwelling price (house), 2018**

Area	LGA	House \$	1 Year Change %	Other Change %
<b>Postcode (a)</b>				<b>3-year change</b>
<b>2408 (North Star)</b>	Gwydir	205,000	-29.3	86.4
<b>2409 (Boggabilla)</b>	Moree Plains	115,00	-11.3	-14.1
<b>4390 (Goondiwindi)</b>	Goondiwindi	385,600	2.0	-5.4
<b>Local Government Area</b>				<b>5-year change</b>
<b>Moree Plains</b>		N/A	N/A	N/A
<b>Gwydir (b)</b>		149,687	-7.9	8.0
<b>Goondiwindi (c)</b>		264,680	-2.9	-2.2

**Source:** (a) SQM Research, September 2018, Residential sales listings, (b) Htag, Houses in GSC, September 2018 (c) Hometrack Housing Valuation System, June 2017.

## Rental availability and cost

Goondiwindi (4390) recorded the highest median weekly rent (\$293.90) across the three postcodes as at September 2018, followed by Boggabilla (\$220) and North Star (\$215) (refer Table 39). There is no private rental market in Toomelah, but the ABS Census 2016 indicated that the median rental price was \$100.00.

**Table 39 Median weekly rent (postcode) 2018**

Area	LGA	House \$/week	1 Year Change %	3 Year Change %	Unit \$/week	1 Year Change %	3 Year Change %
<b>2408 (North Star)</b>	Gwydir	215.00	-14.0	3.0	N/A	N/A	N/A
<b>2409 (Boggabilla)</b>	Moree Plains	220.00	0.0	4.8	304.00	1.1	6.0
<b>4390 (Goondiwindi)</b>	Goondiwindi	293.90	60.9	-2.8	227.50	23.9	34.1

Source: SQM Research, Weekly Rents Index (Median Weekly Reported Rent), September 2018.

There were 10 residential properties listed for rent in Goondiwindi (4390) as at 30 June 2019, which was equivalent to a rental vacancy rate of 0.8 per cent (SQM Research, 2019). No rental listings were recorded for North Star (2408) and Boggabilla (2409) which had vacancy rates of 0.0 per cent. A low number of rental listings is typical of rural localities with a limited stock of dwellings.

## Building approvals

There were 39 new houses and four other new residential buildings approved across the three subject LGAs in the 12 months ending March 2018 with a total value of \$14,990,500 (refer Table 40). Population growth and development has been stagnant across the three LGAs with this trend set to continue as indicated by forecast annual population growth projections of between -1.0 to 0.2 per cent between 2016 and 2036.

**Table 40 Building approvals 2017 to 2018 FYTD, Australia, March 2018**

Area	New houses	New other residential buildings	Total dwellings	Value of new houses	Value of new other residential buildings
<b>Gwydir LGA</b>	12	0	12	\$3,046,800	0
<b>Moree Plains LGA</b>	13	0	13	\$3,928,900	0
<b>Goondiwindi LGA</b>	14	4	18	\$6,877,800	\$1,137,000

Source: OESR, 2018.

### 5.3.3 Short-term accommodation

Online listings indicate that there are a total of 14 motels and hotels offering accommodation in Goondiwindi. There was a total of ten short-term accommodation establishments with fifteen or more rooms in Goondiwindi SA2 as at the June Quarter 2016 with a total of 230 rooms and 677 bed spaces (ABS Tourist Accommodation, 2016d). The most recent occupancy data for in Goondiwindi establishments is for the June 2016 when average occupancy was 49.8 per cent (ibid.) Anecdotal evidence offered in ARTC consultation indicated that Goondiwindi establishment have low vacancy rates.

Short term accommodation in the vicinity of the study area includes the North Star Tourist Park in North Star and the Boggabilla Motel.

ABS data indicate that Moree had a total of 11 short-term accommodation establishments with fifteen or more rooms as at the June quarter 2016, however no data were available on the number of rooms or bed, or on occupancy rates (ABS Tourist Accommodation, 2016d). Wialda's short-term accommodation consists of one motel, one hotel and a caravan park, whilst Bingara also has a motel and a hotel offering rooms. Gwydir Shire also has numerous picturesque camping grounds associated with major touring highways throughout the Shire.

There are no existing dedicated workers' accommodation camps within the three LGAs.

## **5.4 Community values**

Each of the LGAs in the proposal region have community plans (refer Section 2.3) that were developed with extensive community input. The plans reflect shared community values including:

- Development of healthy, inclusive and caring communities
- Environmentally responsible and Sustainable management of resources
- Economic diversification and growth
- Avoidance of land use conflicts
- Maintaining the character and vibrancy of town centres
- Management of flood risks
- Protection of places with cultural heritage significance
- Protect, conserve and enhance natural assets

The following sections discuss specific values in the study area and nearby communities.

### **5.4.1 Amenity and lifestyle**

Amenity refers to the use and enjoyment of private and public properties. Residential amenity in areas close to the study area is characterised by:

- Very low population density, enabling privacy and enjoyment of homes and the outdoors
- Rural land uses (e.g. low-density urban form, open spaces and farming and grazing activities)
- Access to basic local facilities which support community interaction and healthy lifestyles
- Connections and mutual reliance between neighbours
- The rural landscape, characterised by hills, plains, vegetation and vistas across rural land.

Landowners in and near the study area enjoy a rural lifestyle – farming and related industries as a primary source of livelihood and/or lifestyle, a quiet environment, active, self-generated recreation (such as bike riding, horse riding and trail walking in the outdoors). Amenity also includes access to daily needs and social activities in Goondiwindi and Boggabilla in the north and North Star in the south.

North Star's recreation ground, school, town centre and rural views are part of a quiet village-type amenity, along with its proximity to outback touring routes and community events in surrounding country towns. Aspects which support the rural lifestyle include a clean and healthy environment, affordable housing, privacy, close community connections, local community events, and strong community networks.

Boggabilla and Toomelah have similar access to rural views, basic social infrastructure (a school, recreation facilities and places to gather) and open spaces, but housing lots are smaller with less room to move, less privacy, and overcrowded housing limiting some families' amenity.

Amenity in the proposal region is supported by access to extensive open spaces for recreational pursuits, wide rural vistas, connectivity between communities, and access to a range of local facilities, shops and services in the urban centres.

### 5.4.2 Indigenous cultural values

As noted in Section 5.1.1, the study area is within the traditional country of the Gomeroi people.

The Toomelah community and many Boggabilla residents have cultural and social connections to the landscape within and surrounding the study area. The Macintyre River has cultural and social significance to Aboriginal people as a place for family and community events, recreation, fishing and swimming, with access and activities extending kilometres up and down the river. Consultation participants advised that sandy loam areas along river are traditionally designated burial places.

Toomelah residents access remnant forest areas in the existing non-operational railway corridor south of Boggabilla for cultural education, and to find native bush tucker and medicine plants. The Toomelah community settlement is marked by ridge of ironbarks which are important to sense of place.

Social and family values attach to the Toomelah village and Boggabilla township which provide homes and services, however there are no significant employment generators in these communities. Core values in Toomelah include ensuring effective self-management of the community, caring for families, children and elders, improving family and community wellbeing, and access to employment and economic participation.

Cultural heritage values pertaining to the study area are discussed in Appendix E: Aboriginal heritage and Appendix F: Historical heritage.

### 5.4.3 Cultural diversity

The Indigenous population in the proposal region is described in Section 5.2.2. Other cultural diversity in the proposal region is represented by the proportions of households where a primary Language Other than English (LOTE) was spoken and residents who were born overseas (refer Table 41).

All LGAs and local communities had much lower percentages of households where LOTE were spoken than the NSW average, with Goondiwindi having the highest percentage at 13.4 per cent, while the Goondiwindi LGA recorded only 3 per cent. The proposal region also had lower than average percentages of people born overseas, with Moree Plains LGA having the highest percentage at 18.7 per cent compared to the NSW average of 25.2 per cent.

**Table 41 Cultural diversity 2016**

Community	% Born O/S	% Speak LOTE at home
<b>Gwydir LGA</b>	15.5	2.2
<b>Moree Plains LGA</b>	18.7	4.7
<b>Goondiwindi LGA</b>	17.5	3
<b>North Star</b>	17.5	7.3
<b>Boggabilla</b>	10.0	3.1
<b>Goondiwindi</b>	16.9	13.4



Community	% Born O/S	% Speak LOTE at home
<b>Boonal</b>	0	0
<b>Toomelah</b>	0	0
<b>NSW</b>	25.2	27.7

**Source:** ABS 2016 Census of Population and Housing. General Community Profiles.

#### 5.4.4 Community identity

Aboriginal people have a relationship to land and their identity is strongly connected to natural elements of place. As noted in Section 5.4.2, the traditional custodians are strongly attached to the region's cultural landscapes and Toomelah residents are closely connected to the immediate landscape around the community, with the area within a 5 to 10 km radius considered the community's 'back yard' as advised by a community leader. Boggabilla people share some of this sense of identity, but the Boggabilla community includes both Aboriginal and non-Aboriginal people and has a stronger rural identity.

Local communities' identity is generally founded on direct connections to land and the landscape, and in the strong self-help networks that have developed due to isolation. A strong sense of pride in the region's productivity and contributions to regional product are also part of local identity.

The Macintyre River, its floodplains, tributaries and riparian areas are very important to lifestyle and therefore identity, and marks local towns as 'border communities'.

As such, community identity is strongly linked to sense of place, which means 'the beliefs, perceptions, and attitudes held toward a place conscious and unconscious attachments to place [which] can also be a strong component of personal, as well as group or community identity' (De Wit, 2012).

People who have lived near the study area for a long time have a strong sense of local identity, imbued by what the place has meant to them and their families, and their knowledge of the area's physical and environmental attributes.

Factors of value to sense of place and community identity near the study area include:

- Visual connections to Whalan Creek and the Macintyre River
- Homesteads, outbuildings and agricultural infrastructure, evidence of the area's strong connections to farming
- Appreciation of local biodiversity and fauna and flora habitats
- Local roads and highways, which represent access to adjoining neighbourhoods and towns
- Community facilities, which represent shared work, and cultural and recreational values
- Tourism, which is adding to the sense of vitality, and supporting local businesses.

#### 5.4.5 Community cohesion

As noted above, the study area and nearby communities have strong local networks which engender a high degree of community cohesion (connectedness between people and groups). Near the study area, most landowners and farm employees are involved in working relationships with their neighbours involving exchange of labour, machinery and information, and each local town has a strong, interwoven network of community organisations supporting local events, care for community members and local development.

Strong communities exhibit resilience and have well-developed social connections and supports, contributing to community health and wellbeing. There is evidence of both community strength and disharmony in communities near the study area, suggesting that there is strength within sub-populations, but tensions between them.

Using volunteering a measure of community strength, the proposal region reports high levels when compared with NSW, with 30 per cent of the population in Gwydir Shire involved in voluntary activities and 21.6 per cent in Moree Shire, compared with 18.1 per cent in NSW. The ability to access support in times of crisis also indicates the strength of social connections in a community. The proposal region performs at similar levels to those typical for NSW, with 93.2 to 93.8 people per 100 in the region being able to find support outside the home in times of crisis, compared with 93.4 in NSW (PHIDU, 2018a).

Data on acceptance of cultural difference shows that discrimination is more frequent in Moree Plains Shire than in either the Gwydir Shire or NSW (21.5 people per 100 in Moree Plains Shire experience discrimination compared with 19.7 and 19.4 respectively). The rate of people aged 18 and over who do not accept other cultures is 6.4 people per 100 in Gwydir Shire, and 6.0 people in Moree Plains Shire, compared with 4.1 people in NSW (PHIDU, 2018b). In this context, the two main cultural groupings in both Shires Are Anglo-Australian (the dominant group) and Aboriginal Australians.

## 5.5 Employment and industry

This section describes the proposal region's labour force, unemployment rates, labour and skills availability and businesses' capacity to supply the proposal. Data are provided for each LGA, and for the New England and North West Region SA4 (NENW Region) reflecting the broader labour force region from which Proposal personnel may be drawn.

### 5.5.1 Labour force profile

The proposal region's labour force participation based on the population of working age (15 to 64 years) is shown in Table 42. Labour force participation was lower than the NSW average in all areas but was highest in the Goondiwindi LGA at 72.1 per cent, and lower than the regional and NSW averages in the Moree Plains and Gwydir LGAs.

**Table 42 Labour force participation, 2016**

Area	ABS Census 2016	
	Labour force	Participation rate <sup>^</sup>
<b>Goondiwindi LGA</b>	4,700	72.1%
<b>Moree Plains LGA</b>	5,484	66.4%
<b>Gwydir LGA</b>	1,908	65.9%
<b>New England and North West SA4</b>	79,900	72.0%
<b>NSW</b>	4,044,700	77.8%

**Source:** <sup>^</sup>ABS 2016 Census of Population and Housing. \* Australian Government's Small Area Labour Markets publication; ABS, Labour Force, Australia, Jun 2018, cat.no. 6202.0.

Agriculture, forestry and fishing is the primary industry of employment across the proposal region, accounting for more than 45 per cent of Gwydir LGA's workforce, 28 per cent of the Goondiwindi LGA's workforce and 25 per cent of Moree Plains workforce (refer Table 43). Health care and social assistance accounted for 9 to 10 per cent of each LGA's workforce, which was lower than the NSW average and may indicate a shortage of health care workers. The next most common industries of employment across the three LGAs were retail trade (5 to 10 per cent of the total) and education and training (7 to 9 per cent of the total).

Percentages of the labour force employed in the construction industry were lower in the Gwydir LGA (at three per cent) and Moree Plains LGA (at six percent) than in the NENW Region and the Goondiwindi LGA (both at seven per cent) and the NSW state average of eight per cent. The availability of personnel for the construction phase is discussed in Section 7.4.2.

**Table 43 Industry of employment 2016**

Industry	Gwydir LGA (%)	Moree Plains LGA (%)	Goondiwindi LGA (%)	New England and North West Region SA4 (%)	NSW (%)
<b>Agriculture, forestry and fishing</b>	45	25	28	14	2
<b>Mining</b>	0	0	1	2	1
<b>Manufacturing</b>	2	3	3	5	6
<b>Electricity, gas, water and waste</b>	1	1	1	1	1
<b>Construction</b>	3	6	7	7	8
<b>Wholesale trade</b>	1	3	3	2	3
<b>Retail trade</b>	5	8	10	10	10
<b>Accommodation and food services</b>	4	6	6	7	7
<b>Transport, postal and warehousing</b>	2	4	4	4	5
<b>Information media and telecomms</b>	0	0	0	1	2
<b>Financial and insurance services</b>	1	2	1	2	5
<b>Rental hiring and real estate</b>	0	1	1	1	2
<b>Professional, scientific and technical</b>	1	4	3	4	8
<b>Administrative and support services</b>	1	2	2	3	3
<b>Public admin and safety</b>	8	6	3	6	6
<b>Education and training</b>	7	9	8	10	8
<b>Health care and social assistance</b>	10	9	9	13	12
<b>Arts and recreation</b>	1	1	0	1	2
<b>Other services</b>	2	4	4	4	4
<b>Not stated/inadequately described</b>	6	6	6	3	5

**Source:** Census 2016 Working Population Profile. Based on place of employment.

The proposal region's occupational profile shows high percentages of managers, managers across the three LGAs and New England and North West Region which is attributable to the significant number of farmers and farm managers working within the agricultural industry.

Other occupations that are well represented across the proposal region compared to the breakdown for NSW include labourers and machinery operators and drivers (refer Table 44).

**Table 44 Occupational groups 2016**

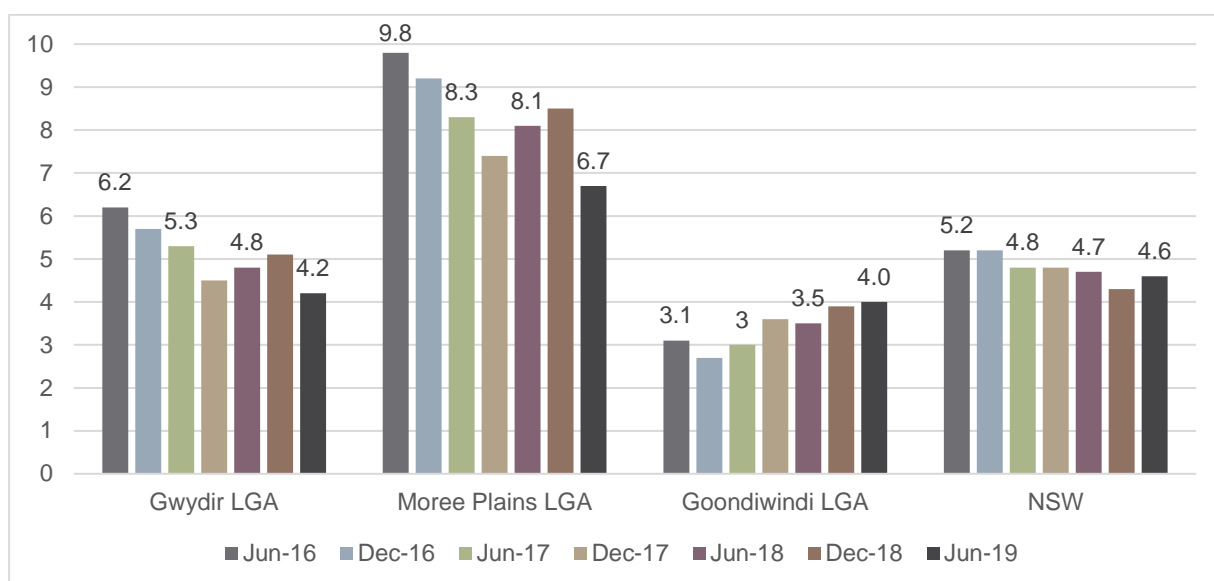
Occupation	Gwydir LGA (%)	Moree Plains LGA (%)	Goondiwindi LGA (%)	New England and North West Region SA4 (%)	NSW (%)
<b>Managers</b>	36.8	20.8	20.8	17.0	13.5
<b>Professionals</b>	10.2	14.8	11.7	16.3	23.6
<b>Technicians and trades workers</b>	7.6	11.1	12.7	13.0	12.7
<b>Community and personal service workers</b>	8.2	9.9	9.3	10.4	10.4
<b>Clerical and administrative workers</b>	7.7	12.4	11.1	11.3	13.8
<b>Sales workers</b>	4.5	7.6	8.0	9.0	9.4
<b>Machinery operators and drivers</b>	7.8	9.2	10.0	7.6	6.1
<b>Labourers</b>	15.0	12.3	15.2	13.7	8.8

Source: Census 2016 Working Population Profile.

### 5.5.2 Unemployment

Figure 3 shows the smoothed unemployment rate for the three LGAs within the proposal region and NSW during the three years June 2016 – June 2019. In the Gwydir LGA, the unemployment rate decreased from 6.2 per cent in June 2016 to 4.2 per cent in June 2019 (two percentage points) resulting in an unemployment rate below the NSW average of 4.6 per cent in June 2019.

In the Moree Plains LGA, the unemployment rate decreased from 9.8 per cent to 6.7 percent (3.1 percentage points) between June 2016 and June 2019, which was a considerable improvement, however the unemployment rate in June 2019 remained above the NSW average. The unemployment rate in the Goondiwindi LGA increased over the same three year period, from a low of 3.1 per cent in June 2016 to 4.0 per cent in June 2019.



**Figure 3 Unemployment Rate (per cent), June Quarter 2016 – June 2019**

**Source:** Australian Government Department of Employment, Skills, Small and Family Business, 2019.

Youth unemployment rates (for people 15 to 24 years) were higher than the general rate in each LGA at June 2016. For the Goondiwindi and Gwydir LGAs, the youth unemployment rate was more than double the general rate (refer Table 45).

**Table 45 Youth labour force (15 to 24 years) by LGA, 2016**

LGA	Employed total	Unemployed	Total labour force	Unemployment rate (%)
Goondiwindi	659	53	724	7.32
Moree Plains	704	105	811	12.95
Gwydir	223	31	256	12.11

**Source:** ABS 2016 Census of Population and Housing.

Indigenous Australians are inadequately represented in the workforce, partially due to systemic disadvantage and discrimination, but also because rural and remote areas have limited employment options outside agriculture and small businesses. Rates of unemployment for Indigenous people were very high across the proposal region, at 21.1 per cent in the Moree Plains LGA, 16.4 per cent in the Goondiwindi LGA and 10.2 per cent in the Gwydir LGA (ABS, 2016f).

### 5.5.3 Labour and skills availability

The Australian Industry Group Construction Outlook survey conducted in March and April 2018 (Australian Industry Group and Australian Constructors Association, 2018) found that the construction industry is experiencing significant labour shortages and anticipates this may worsen over the next year.

Construction businesses are reporting widespread difficulties in recruiting skilled labour and sourcing materials for major projects. A total of 66.7 per cent of respondents, up from 63.6 per cent 6 months ago, reported either 'major' or 'moderate' difficulty in recruiting skilled labour in the six months to March 2018. Difficulties sourcing sub-contractors was comparable with 66.7 per cent citing 'major' or 'moderate' difficulty, an increase from 50.0 per cent in the previous six months.

Construction companies are forecasting strong growth in major project work during 2018 and 2019, led by a strong pipeline of transport infrastructure projects. The total value of non-residential construction work was forecast to rise by 9.3 per cent in 2018 and a further 8.0 per cent in 2019. the value of non-mining infrastructure construction work was expected to increase by 17.1 per cent in 2018, led by growth in the value of road construction (22.3 per cent) and rail construction (16.0 per cent).

A higher proportion of businesses (38.1 per cent) reported 'major' or 'moderate' difficulty with hiring and purchasing equipment compared with six months earlier (31.8 per cent). For 2018 with 62.5 per cent of respondents expecting 'very busy' or 'busy' levels of activity.

The most recent Australian Industry Group Construction Outlook survey (Australian Industry Group and Australian Constructors Association, 2018) found that:

- Employment in major construction had increased by 4.3 per cent in the year to February 2018
- Labour shortages are increasing, with 66.7 per cent of respondents (Australian construction businesses), reporting either 'major' or 'moderate' difficulty in recruiting skilled labour. This was a large increase from the March 2017 survey period when 39.1 per cent of respondents reporting either major or moderate difficulty in recruiting skilled labour
- Skilled labour sourcing difficulties were expected to worsen during 2018.

The most recent National Skills Needs List (showing shortages in trade workers) indicates that a very wide range of trades are experiencing skills shortages at the national level. Those of potential interest to the proposal which are experiencing shortages include electrical equipment trades workers, metal fabricators and pressure welders (Australian Government, 2018).

Labour market research indicates that at the December quarter 2018, engineering trades (including sheet metal trades workers, metal fabricators, welders, fitters and metal machinists) were in short supply in NSW, and employers have found it difficult to fill construction trade vacancies, with this year being the fourth consecutive year where less than half of all vacancies surveyed were filled (Department of Employment Skills Family and Small Business, 2018).

Verification of availability and the match of available workers' skills to employment opportunities is not possible until labour market testing prior to commencement of operations. However, it is likely that in the cumulative context, the proposal will compete for labour with other infrastructure projects, including other Inland Rail projects.

#### **5.5.4 Major businesses**

Gwydir LGA's gross regional product (GRP) was approximately \$273 million in the year to June 2017 of which the agricultural, forest and fishing industry contributed approximately \$250 million. Moree Plains LGA's GRP in the same year was approximately \$910 million, of which approximately \$380 million was attributed to agriculture, forestry and fishing (Regional Development Australia Northern Inland, 2018). Most of the region's businesses were in the agricultural, forest and fishing industry, with approximately 450 businesses counted in the Gwydir LGA and more than 700 businesses counted in the Moree Plains LGA in 2013 (*Ibid*).

Goondiwindi LGA's GRP in the year to June 2017 was approximately \$720 million, of which \$515 million was due to the agricultural, forest and fishing industry. Goondiwindi's 1,921 registered businesses in 2017, 863 were in the agricultural, forestry and fishing industry, 151 were in the construction industry, and 103 were in the transport, postal and warehousing industry (id.Profile, 2018).



Large agribusinesses located near the study area including:

- The Oakhurst Partnership which has major grazing and cattle production operations north of North Star
- Merewah Poll Hereford stud, which is one of the oldest Hereford studs in Australia and is situated near Boggabilla on the banks of the Macintyre River
- Namoi Cotton Limited, a cotton processing and marketing organisation that has an extensive network of ginning, marketing and logistics operations and a warehouse facility in Goondiwindi
- Woods Group, which owns a grain processing and storage facility in Goondiwindi and has six vertically integrated business divisions, with a transport depot and container handling equipment facility at Goondiwindi.

Several other family and corporate operations in the proposal region are producing irrigated cotton, wheat and citrus. wheat, sorghum, barley, chickpeas, pecans, cotton and sunflowers and cattle.

### **5.5.5 Business capacity to supply proposal**

There are no businesses operating in North Star, except for B&W Rural (an agricultural service provider which has a branch office there) and nearby farms. . There are no businesses located in Toomelah.

Boggabilla has a small range of shops and services which may service construction personnel's needs, including:

- A general store and a supermarket
- The Town and Country Club
- The Wobbly Boot Hotel
- A mechanic
- Fuel stations.

Goondiwindi's Chamber of Commerce notes that the Goondiwindi LGA contains a wide range of businesses, with a heavy emphasis on farm production, service and retail industries. Businesses in Goondiwindi which may have capacity to engage with the proposal include:

- Civil construction companies
- Earthmoving services
- Diesel and petrol suppliers
- Plumbers, electricians, mechanics and building contractors
- Engineering and machining services
- Transport companies
- Steel fabrication companies
- Hardware and gardening service suppliers
- Accommodation facilities
- Hotels and meeting venues
- Shops which may experience either direct proposal demand or personnel expenditure.

A small range of earthmoving and construction-oriented businesses operate within the Gwydir and Moree Plains LGAs.

MPSC and GSC both advised in consultation that there were approved quarry developments in their LGAs, with anticipation that the applicants could supply Inland Rail projects. ARTC is also in discussion with local landowners regarding the use of borrow pits on their properties to supply material for construction of the rail embankment.

The Department of Industry's register of Indigenous businesses identifies three businesses (including the Moree LALC, a consulting business, and an art studio) in Moree, and one in Warialda (an engineering business). There were no Indigenous businesses registered in Toomelah or Boggabilla (Department of Industry, 2018) however community consultation identified one existing Indigenous-owned nursery business in Boggabilla, as well as business development plans within Boggabilla and Toomelah with a view to increasing engagement with the proposal.

As noted in Section 5.3.3, major construction businesses in Australia are experiencing increasing difficulties accessing construction equipment and supplies. ARTC is undertaking research and consultation to identify the range of local, regional and Indigenous businesses who could supply the proposal's construction and operational phases.

## 5.6 Social infrastructure

This section describes the provision and location of key services and facilities in the proposal region. A radius of 20 km from the study area has been considered in recognition that people in the study area and nearby communities' access most of their services in their local towns or in Goondiwindi, and services outside this radius are unlikely to experience increased demand or proposal impacts such as noise or increased traffic.

### 5.6.1 Primary and secondary education

There are four public primary schools and one public high school within 20 km of the study area, as shown in Table 46. Boggabilla and Toomelah Public Schools are operated under the NSW Government's Connected Communities Program, which supports another 13 schools across the State identified as located in the most disadvantaged areas of remote NSW.

There are also two private schools in Goondiwindi including St Mary's and Border Rivers Christian College. There are also three childcare centres, a kindergarten and a family day care scheme operation in Goondiwindi.

**Table 46 Schools**

School	Type	Location	Proximity to study area (km)
<b>North Star Public School</b>	Primary School	Edward Street, North Star	1.5
<b>Toomelah Public School</b>	Primary School	Off Tucka Tucka Road, Boggabilla	2.4
<b>Boggabilla Central School</b>	Primary School	South Street, Boggabilla	8.5
<b>Border Rivers Christian College</b>	College	Gibson Street and Lilly Street, Goondiwindi	14.6
<b>Goondiwindi State Primary School</b>	Primary School	Herbert Street, Goondiwindi	15.8
<b>St Mary's Goondiwindi</b>	Private School	Brisbane Street Goondiwindi	16.0
<b>Goondiwindi State High School</b>	High School	3 Sandhurst Street, Goondiwindi	17.0

### 5.6.2 Further education and training

Further education and training facilities in the proposal region include the New England Boggabilla TAFE Campus and the Gateway to Training Centre, as shown in Table 47.

TAFE New South Wales – New England Institute provides vocational education and training on a needs basis for the local community at the Boggabilla campus. The frequency and types of training certificates offered is dependent on demand across the local community.

Goondiwindi SILO Inc (Schools Industry Links Outreach) trading as Gateway to Training (GTT) is a community-based organisation which aims to provide flexible and responsive lifelong learning opportunities for regional communities. SILO owns and manages the GTT training centre in Goondiwindi which operates on a commercial basis. A New England Institute of TAFE campus is in Moree and may also service the proposal region.

**Table 47 Further education and training facilities**

Facility	Type	Location	Proximity to study area (km)
<b>TAFE New England Boggabilla Campus</b>	TAFE	South Street, Boggabilla	9.1
<b>Gateway to Training</b>	Training Centre	Russell St, Goondiwindi	17.1

Training Services NSW is responsible for government-funded vocational education and training in NSW through the Department of Industry (Department of Industry, 2018). The nearest office to the study area is in Tamworth. Training Services NSW funds programs and strategies to focus vocational education and training on NSW priorities. Training Services NSW programs and services include a focus on Aboriginal employees, the agricultural industry, infrastructure skills, apprentices and vocational education and training pathways.

The Regional Vocational Education and Training (VET) Pathways Initiative supports 15 to 19-year olds not in a job or studying to find pathways into education, training and work. The Careers Network in the New England North West Region acts as the local service provider which is currently offering young people access to career mentoring, planning and brokerage of pathways to training and employment, including apprenticeships and traineeships (Career Network, 2018).

Joblink Plus is a not for profit community-based organisation that provides employment services, support and training to communities across 80 sites located within the Hunter, New England North West, Far West Orana and Central Western NSW. Joblink Plus has shopfronts at Boggabilla and Moree and is active in promoting employment opportunities amongst the local indigenous community.

### 5.6.3 Hospital and health services

Goondiwindi Hospital is the primary health care facility that services the proposal region. Other community health centres within nearby communities include the Toomelah and Boggabilla Community Health Centres, Blue Care Goondiwindi and Care Goondiwindi, as shown in Table 48.

**Table 48 Hospitals and health care facilities**

Health care facility	Type	Location	Proximity to study area (km)
<b>Toomelah Outreach Health Clinic</b>	Health	Building Number 26, Toomelah, Boggabilla	1.5
<b>Boggabilla Community Health Centre</b>	Community health centre	74 Merriwa St, Boggabilla	8.6
<b>Blue Care Goondiwindi</b>	Mental health services/centre	18 Phar Lap Ct, Goondiwindi	14.6
<b>Care Goondiwindi</b>	Community health centre	111 Callandoon St, Goondiwindi	16
<b>Goondiwindi Hospital</b>	Hospital	4 Bowen St, Goondiwindi	16.2

The Toomelah Health Centre provides access to a holistic range of health and community support services (primary health, disability support, transport and accommodation support). The centre is serviced by a visiting GP once a week, two Registered Nurses, two Aboriginal Health Workers, one Community Facilitator and one Family Support worker. The Centre has limited funding, no community transport, limited telecommunications/internet infrastructure and challenges with cross-border referrals.

#### 5.6.4 Police, emergency services and justice

Key police, emergency service and justice facilities that service the study area are in Goondiwindi including the police, fire and ambulance stations, as shown in Table 49.

Consultation with police and emergency service stakeholders identified the study area was serviced by both NSW and Queensland agencies, localised resources were limited, and 000 emergency calls were directed through Queensland for response.

The closest Police Station to the proposal is in Boggabilla, and the nearest ambulance station is in Goondiwindi. The closest Rural Fire Brigades (RFB) are the North Star and North Star East Rural FRB and the Boggabilla RFB.

**Table 49 Police, emergency services and justice facilities**

Facility	Type	Location	Proximity to study area (km)
<b>Boggabilla Police Station</b>	Police	96 Merriwa Street, Boggabilla	8.8
<b>Boggabilla Rural Fire Brigade</b>	Fire	Macintyre Street, Boggabilla	8.8
<b>Goondiwindi Ambulance Station</b>	Ambulance	183 Marshall St, Goondiwindi	15
<b>Goondiwindi Fire Station</b>	Fire	173 Marshall St, Goondiwindi	15.1
<b>Goondiwindi Police Station</b>	Police	Herbert St, Goondiwindi	15.9
<b>Goondiwindi Magistrates Court</b>	Courthouse	21 Herbert Street, Goondiwindi	16.1
<b>NSW Rural Fire Service (RFS) - Namoi-Gwydir</b>	Fire Control Centre	Memorial Avenue, Bingara	100

### 5.6.5 Aged care and retirement facilities

Two residential retirement facilities are in Goondiwindi including Oak Tree Retirement Village and Kaloma Home for the Aged, as shown in Table 50.

**Table 50 Aged care and retirement facilities**

Aged care and retirement facilities	Type	Location	Proximity to study area (km)
<b>Oak Tree Retirement Village</b>	Residential aged care	23 Albert Street, Goondiwindi	16.4
<b>Kaloma Home for the Aged</b>	Residential aged care	16 Gough St, Goondiwindi	16.7

### 5.6.6 Community and civic services

Two community centres within nearby communities include the Toomelah Community Centre (also known as Susan McGrady Memorial Centre) and the Goondiwindi/Waggamba Community Centre as shown in Table 51.

**Table 51 Community and civic services**

Community Centres	Type	Location	Proximity to study area (km)
<b>Toomelah Community Centre (Susan McGrady Memorial Centre)</b>	Community Centre	Off Tucka Tucka Road, Toomelah	1.5
<b>Goondiwindi/Waggamba Community Centre</b>	Community Centre	26 Russell Street, Goondiwindi	17.2

### 5.6.7 Recreation and cultural facilities

There are a wide range of recreational and cultural facilities located in Goondiwindi that service surrounding communities as detailed in Table 52 and Table 53. In Toomelah, the Community Centre is the key formal recreation venue, in addition to a local sports ground, whilst the Macintyre River and its banks provide a key cultural and recreational resource.

**Table 52 Recreational facilities**

Recreational facilities	Type	Location	Proximity to study area (km)
<b>North Star Sporting Club</b>	Sporting Club	North Star Road, Gwydir	1.9
<b>TAB Boggabilla Town &amp; Country Club</b>	Club	94 Yeoman Street, Boggabilla	9.2
<b>Goondiwindi Council Pool</b>	Pool	Marshall Street, Goondiwindi	15.2
<b>Goondiwindi Showground</b>	Showground	Goondiwindi	15.5
<b>Goondiwindi Racecourse</b>	Racecourse	41 McDougall Street, Goondiwindi	15.8
<b>Goondiwindi and District Community Garden</b>	Community Garden	2/33 McDougall Street, Goondiwindi	16.3
<b>Goondiwindi Golf Club</b>	Golf Club	8 Hindmarsh Street, Goondiwindi	16.7
<b>The Sundial Goondiwindi Events Centre</b>	Events Centre	26 Russell Street, Goondiwindi	17.2

Recreational facilities	Type	Location	Proximity to study area (km)
<b>PCYC Goondiwindi</b>	PCYC	1 Russell Street, Goondiwindi	17.3
<b>Goondiwindi Botanic Gardens</b>	Botanic Gardens	Brennans Road, Goondiwindi	18.9
<b>Goondiwindi Gun Club</b>	Shooting Range	104 Gun Club Road, Goondiwindi	20.4

**Table 53 Cultural facilities**

Cultural facilities	Type	Location	Proximity to study area (km)
<b>Customs House Museum</b>	Museum	111 Callandoon Street, Goondiwindi	15.1
<b>Goondiwindi Regional Visitor Information Centre</b>	Tourist Information Centre	45 Bowen Street, Goondiwindi	15.7
<b>Goondiwindi War Memorial</b>	War Memorial	Marshall Street, Goondiwindi	16.1

## 5.7 Health and wellbeing

A complex interaction of social, economic, environmental, behavioural and genetic factors helps to shape a population's health and wellbeing. This section describes known existing conditions in the proposal region against a selected range of socio-economic and health indicators that impact on community health and wellbeing. It includes consideration of:

- Selected socio-economic factors describing population wellbeing
- Selected population health factors describing present health status
- Access to health services
- Community safety
- Road and rail safety.

Nearby communities have relatively small populations with a significant Aboriginal presence and include one of Australia's most disadvantaged communities living in Toomelah. In 1988, the Human Rights Commission's Toomelah Report revealed the community of Toomelah as being exposed to some of the worst living conditions in Australia (Human Rights Australia, 1988), and the data presented in this section indicate that Toomelah is still experiencing extreme disadvantage.

The following sections address the factors that influence Aboriginal health and wellbeing as well as that of the general population.

Additional statistical geography has been used to support this reporting (refer Table 54).



**Table 54 Statistical Geography for Local Aboriginal Communities**

Statistical Area	Area Description	Indigenous Population <sup>^</sup>
<b>Moree Plains Indigenous Area (IARE)</b>	Predominantly aligns with Moree Plains Local Government Area Includes Boggabilla, Toomelah and Moree Plains ILOCs Referenced for Census and PHIDU data reporting.	931 people
<b>Boggabilla Indigenous Location (ILOC)</b>	Boggabilla township (aligns with Boggabilla Urban Locality) Referenced for Census reporting	351 people
<b>Toomelah Indigenous Location (ILOC)</b>	Based on Toomelah village and land area south-west Referenced for Census reporting	204 people

### 5.7.1 Aboriginal population health and wellbeing

A person's Aboriginal status is an important indicator of health status, as Aboriginal people experience a greater burden of disease and injury than non-Aboriginal Australians (Queensland Health, 2017). There is a clear relationship between the social inequalities experienced by Aboriginal people and their current health status (Thomson, N., et al, 2012). Issues of cultural dislocation, personal trauma and the ongoing stresses of disadvantage, racism, alienation and exclusion are all implicated in their generally poor health status (Calma et al, 2017).

The National Aboriginal Community Controlled Health Organisation defines Aboriginal health as referring not just the presence of the physical well-being of an individual, but also the presence of social, emotional and cultural well-being of the whole community in which each individual is able to achieve their full potential, thereby bringing about the total well-being of their community (National Aboriginal Community Controlled Health Organisation, 2018).

The following profile outlines the status of the health and wellbeing of the Aboriginal population in the proposal region with a focus on the Boggabilla and Toomelah communities. It reports against a range of socio-economic and population health factors, relying mainly on data reported for the Moree Plains Indigenous Area (IARE). Boggabilla and Toomelah comprise 54 per cent of the population in this IARE.

The overall picture is one of a severely disadvantaged population, particularly in Toomelah, with a heavy burden of poor health and a high-risk profile for substance abuse and mental illness, exposure to violence, early death, and chronic disease.

#### Age profile

The age distribution of Australia's Aboriginal population is much lower than that of the non-Aboriginal population, consistent with the shorter than average life expectancy of Aboriginal Australians (Department of Health, 2018). The median age at death for Aboriginal people in Moree Plains IARE is 55 years, compared with 81 years for the general NSW population (PHIDU ATSI and LGA data, 2018).

More than half the Aboriginal population is younger than 25 years in Toomelah and Boggabilla (58 per cent and 53 per cent respectively – refer Table 55). People younger than 16 years make up 39 per cent of the Aboriginal population in Toomelah and 28 per cent in Boggabilla, compared with 22 per cent in NSW. By contrast, there is only a small proportion of people older than 65 years in Toomelah and Boggabilla (5.4 per cent and 7.8 per cent respectively), compared with NSW (15.2 per cent).

**Table 55 Selected Age Groups (% in groups)**

Community	<16 years %	16-24 years %	>65 years %
Boggabilla ILOC	28.2	21.9	7.8
Toomelah ILOC	39.2	25.5	5.4
Moree Plains LGA	25.6	10.3	14.2
NSW (general population)	22.1	11.4	15.2

**Source:** ABS Census of Population and Housing 2016, Count of persons aged 5 years and over.

### Advantage/disadvantage

As outlined in Section 5.2.1, the SEIFA Indices provide a composite of factors that indicate the presence of disadvantage. A more specific index, the Indigenous Relative Socioeconomic Index (IRSEO) was developed to reflect relative advantage or disadvantage at the Aboriginal Area level. Applying the IRSEO index, a score of 1 represents the most advantaged area and a score of 100 represents the most disadvantaged area (PHIDU, 2018b).

Aboriginal people consistently have lower socio-economic status, with a direct correlation between disadvantage and remoteness (Dept. of the Prime Minister and Cabinet, 2014). However, the communities of Boggabilla and Toomelah score just 81 on the IRSEO, indicating they are among the most disadvantaged Aboriginal communities in Australia. This points to a disparity between the degree of relative disadvantage in these communities and the greater advantage enjoyed by the broader community in which they live (discussed in Section 5.7.2).

The presence of children in jobless families is a further indicator of socio-economic disadvantage. In the Moree Plains IARE, the percentage of children under 15 years in Aboriginal families that are jobless is especially high compared with equivalent rates for State's overall Aboriginal and general populations. Well over half of the Aboriginal children in Moree Plains IARE (57.6 per cent) live in jobless families, compared with 38 per cent in the NSW Aboriginal population, and 11.5 per cent in the entire NSW population (PHIDU, 2018b).

Access to the Internet at home provides access to the outside world, influencing opportunity for economic and social participation, and access to services. A household is disadvantaged if it lacks internet access to the outside world. Almost half (46.8 per cent) of Aboriginal households in private dwellings in Moree Plains are disadvantaged by not having to the internet at home, compared with the State Aboriginal average of 22.5 per cent and 14.7 per cent for all households in NSW.

## **Access to health care**

Data on potentially preventable hospitalisations provides a proxy indicator for access to primary health care (including by general practitioners, medical specialists, dentists, nurses and allied health professionals), indicating where hospitalisation could have been avoided with appropriate preventative health interventions and early disease management. The Aboriginal population of Moree Plains IARE has severely poor access to primary health care, with the rate of preventable hospital admissions for this population more than 3 times that for the Moree Plains and Gwydir LGAs, 2.6 times that for the State's Aboriginal population, and nearly four times the rate for the State's general population.<sup>1</sup> This is likely to reflect a combination of factors including poor accessibility to service due to remoteness and limited public transport, service capacity and cultural appropriateness, and social/health behaviours.

Goondiwindi Hospital is the primary service centre for health care in the region, supported by community health services at the Boggabilla Community Health Centre, and the Toomelah Outreach Health Clinic. There are no public transport services within the Boggabilla and Toomelah area, other than the school bus (for student use only). The lack of transport is a significant barrier to accessing health and community services for anyone without access to private transport and is particularly significant for the Toomelah community where car ownership is very low (57 per cent of households have no vehicle).

The Toomelah Empowerment Project reported in 2013 that the issue of highest concern for residents in Toomelah was the lack of and inadequacy of medical services (McGrady et al, 2013). With the services that were available, residents reported problems with lack of follow-up, loss of trust and cultural inappropriateness of some services.

The Boggabilla Community Connect event held on 19 October 2019 was an initiative supported by MPSC to promote available community and health services to the local community. Consultation with service providers at this event identified several issues regarding access and delivery of services, which are discussed further in Section 5.7.3.

This included challenges in facilitating access to appropriate diagnoses for residents with complex health care needs, maintaining a continuity of care across services and the need to address food security for local residents and particularly young people.

## **Access to employment**

With the presence of the TAFE campus in Boggabilla vocational education levels amongst Aboriginal people are high. Consultation with local education and training providers attributed high participation rates to several incentives available for local Aboriginal community members, which address some of the traditional barriers to accessing education such as the cost of fees, access to transport, background information checks and associated certificates. In the Moree Plains IARE, 40.1 Aboriginal people per 100 have a vocational certificate compared with 24.6 per 100 people for the State's Aboriginal population, and 15.2 per 100 people for the total NSW population (PHIDU, 2018b). However, this is not translating to employment and young people are unable to find work (Toomelah Boggabilla former LALC Chairperson). Sustained joblessness persists, increasing the risk of poverty and its perpetuation from one generation to another.

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<sup>1</sup> Equivalent to 10,007.2 per 100,000 Indigenous people in Moree Plains, 3,828 for NSW Indigenous population and 2,564 for NSW general population. PHIDU (ATSI and LGA). 2018. Referencing 2014/15 data.

Unemployment in Boggabilla is high at 11.3 per cent, compared with the State level of 3.1 per cent. By contrast, in Toomelah unemployment is low at 2.3 per cent, with 11 of its very small labour force of 13 people employed. Consultation with Toomelah Health Centre emphasised the importance of employment to individual and community wellbeing.

Both Boggabilla and Toomelah have a low level of labour force participation within their working age population. Typically, in NSW 36 per cent of the general population is not in the labour force. This compares with Boggabilla where 67 per cent of working age people are not in the labour force, while in Toomelah an even higher 88 per cent (112 people) of working age people are not in the labour force. As disability levels are not particularly high in this community, such low rates of labour force participation may well reflect the hopelessness that people feel about the prospect of finding employment, especially in Toomelah and Boggabilla where jobs are scarce (Altman and Jordan, 2009).

Past experience shows the willingness of residents to work. Following the Human Rights Commission Report (The Toomelah Report), one important initiative was the introduction of the Community Employment Development Program (CEDP) in Toomelah which resulted in the employment of 130 residents, helping the community become an empowered and successful town as a result (Graham, 2012). However, the CDEP was defunded by the Australian Government in 2009, with a rapid loss of employment following. Conditions in the community have since regressed (McGrady et al 2013).

### **Population health**

It is widely recognised that Aboriginal communities have a greater burden of poor health than other Australians. It is therefore even more concerning that burden of poor health in the Toomelah and Boggabilla communities is even greater than that which is typical for Aboriginal communities. The most pressing of the issues identified by participants in the Toomelah Empowerment Program relate directly to the health burden, and included the inadequacy of medical services, levels of substance abuse, especially amongst young people, and unemployment (Ibid).

### **Developmental vulnerabilities**

Developmental vulnerabilities in childhood provide a useful indicator of potential long-term effects on a child's later health, wellbeing and academic success. The data indicates that Aboriginal children in nearby communities are more likely than not to have long term poorer health outcomes. The majority (57.1 per cent) of Aboriginal children in the Moree Plains IARE were assessed as being developmentally vulnerable in one or more domains in the first year of school, compared with 35.8 per cent for the State's Aboriginal population. Both are significantly higher than the rate for the general NSW population at 20.2 per cent (PHIDU, 2018b). More than half of the students at Toomelah Public School were identified as having experienced the highest level of trauma, which severely affects their ability to engage in an academic environment. Importantly, students recognise the school as their safe space.

## Hospital admissions

Nationally, Aboriginal people have hospital admission rates at least twice the rate for other Australians. However, the Aboriginal population in Moree Plains IARE have lower health status than is typical for the wider Aboriginal population, as indicated by the following hospital admission rates for selected diagnoses:

- Renal dialysis admissions occur at 1.9 times the rate for Aboriginal people State-wide<sup>2</sup>
- Circulatory system disease admissions occur at 1.8 times the rate for the State's Aboriginal and general populations<sup>3</sup>
- Respiratory system disease admissions occur at 2.4 times the rate for Aboriginal NSW, and at similar levels to the State's general population.<sup>4</sup>

## Suicide, self-harm and mental health

Suicide (attempts and completions), self-harm and mental health issues are evident at high levels in the Moree Plains IARE, and reportedly especially high in Toomelah (Ibid). The Royal Commission into Aboriginal deaths in custody noted the interconnected issues of cultural dislocation, personal trauma and the ongoing stresses of disadvantage, racism, alienation and exclusion as contributing to the heightened risk of mental health problems, substance misuse and suicide (Department of Health, 2018). Given that collective trauma and ongoing socio-economic deprivation are drivers of escalating self-harm and suicide rates among Aboriginal Australians (Hunter and Milroy, 2006) it comes as no surprise that the suicide rate for Aboriginal Australians is 2.6 times the rate of non-Aboriginal Australians, and in NSW 1.4 times rate of the non-Aboriginal population (Department of Health, 2018).

The highest age-specific rate of Aboriginal and Torres Strait Islander suicide is among males between 25 and 29 years of age and is four times higher than that for non-Aboriginal Australians in the same age group (Ibid). While data are not available for Toomelah, the suicide rate may even be higher, given the level of disadvantage that young people are exposed to here, and the fact that so many of the other health risk factors exceed levels that are typical for the wider Aboriginal population.

The Toomelah Empowerment Report noted that substance abuse escalated in Toomelah after the loss of employment through the CDEP, with a devastating impact on the community leading to the escalation of mental health issues, suicide, and domestic violence (McGrady et al, 2013). This is reflected in the health data. Death from external causes (suicide, self-inflicted injuries and road traffic injuries) amongst the Aboriginal population in Moree Plains IARE occurs at an alarmingly high rate, at more than 11 times the State's overall average and almost double the State's average for its Aboriginal population (equivalent to 111.2 deaths per 100,000 people compared with 56.1 people per 100,000 State-wide Aboriginal population and 9.8 people per 100,000 for the general population) (PHIDU, 2018b).

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<sup>2</sup> Equivalent to 58,194.5 admissions / 100,000 people in Moree Plains compared with 30,014.5 for Indigenous NSW. PHIDU (ATSI) 2018. Referencing 2014/15 data

<sup>3</sup> Equivalent to 2,670 admissions per 100,000 people, compared with 1,727 per 100,000 for the general NSW population and 1,470 per 100,000 for Indigenous NSW. PHIDU (ATSI and LGA) 2018. Referencing 2014/15 data

<sup>4</sup> Equivalent to 1,943.6 admissions / 100,000 people in Moree Plains, 788.1 for Indigenous NSW and 1,917.3 for general NSW population. PHIDU (ATSI and LGA) 2018. Referencing 2014/15 data

Self-harming often precedes suicide. The rates of hospitalisation for intentional self-harm exceeds the rate of completed suicide for both Aboriginal and non-Aboriginal people, with females hospitalised at higher rates than males (3.9 females per 1,000 people compared with 3 males per 1,000 people). Aboriginal females self-harm at more than twice the rate of non-Aboriginal females, while Aboriginal males self-harm at three times the rate of non-Aboriginal males (Department of Health, 2018).

Both suicide and self-harming are associated with mental health issues which are high in the Moree Plains IARE, and closely associated with issues of cultural dislocation. In the Moree Plains IARE, mental health related hospital admissions occur at 1.75 times the rate of admissions for the State's Aboriginal population, and more than 2.4 times the rate of the State's general population.<sup>5</sup>

## **5.7.2 General population health and wellbeing**

### **Socio-economic factors**

Social and economic conditions are among the most important of factors that help to shape a population's health and wellbeing. A safe environment, adequate income, meaningful social roles, secure housing, higher levels of education and social support are all associated with better health (McKiernan, Young and Copeland, 2005). Key factors are outlined below.

### **Advantage and disadvantage**

Research consistently establishes that the most disadvantaged people carry the greatest burden of poor health. The Index for Relative Socio-economic Advantage and Disadvantage (IRSAD) is an area-based index that measures socio-economic advantage and disadvantage in terms of peoples' access to material and social resources, and their ability to participate in society. The Index is ranked so that relativity with other areas can be understood.

There is a correlation between an area's level socioeconomic status and the health of its population. People living in areas that are relatively more disadvantaged are more likely to experience poor health, be smokers, engage in high risk drinking behaviour and be obese (Adhikari, 2006). The converse is also true - areas that are more advantaged enjoy better health status.

The IRSAD shows that North Star scores above the standardised NSW score of 1,000, suggesting neutrality in terms of relative advantage or disadvantage (refer Section 5.2). However, intense pockets of disadvantage exist within Aboriginal communities in Moree Plains, scoring among the most disadvantaged communities in Australia as noted previously. As the Moree Plains LGA scored within 80 or so points below the standardised NSW score at 919, if Aboriginal disadvantage were to be discounted, this score would be closer to the standardised NSW score. This suggests that within the Shire there is considerable disparity in circumstances of advantage and disadvantage between Aboriginal and non-Aboriginal populations.

The presence of vulnerable groups is an indicator of the level of social disadvantage experienced in the community. Both Gwydir and Moree Plains Shires have a higher proportion of children under 15 years living in jobless families (13.4 per cent in Gwydir Shire and 20.6 per cent in Moree Plains Shire, compared with 11.5 per cent for NSW), but significantly less than the 57.6 per cent of children in Moree Plains IARE, confirming the disparity between Aboriginal and non-Aboriginal families referred to above (PHIDU, 2018).

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<sup>5</sup> Equivalent to 4,465 admissions / 100,00 people compared with 1,894 / 100,000 people for the general NSW population and 2,533 / 100,000 people for Indigenous NSW. PHIDU (ATSI and LGA) 2018. Referencing 2014/15 data



## **Ageing**

Ageing is key determinant of health as the risk of poor health and disability increases with age. The proposal region has an ageing population, with Gwydir Shire having the oldest population with a median age of 48 years, compared with Moree Plains at 38 years, like the NSW median. This younger profile is influenced by the very young median age of Aboriginal communities in Boggabilla and Toomelah.

Almost one quarter of Gwydir Shire's population is older than 65 years while only 14 per cent of Moree Plains Shire's population is in this age group. This ageing profile suggests demand for health and other services relevant to both an ageing population and the factors causing the shorter life expectancy in the Aboriginal communities of Moree Plains Shire.

## **Disability**

People with disabilities face greater challenges across most of the social determinants of health, impacting their ability to find work, participate in community activities, access housing, health and support services. They are also often reliant on a low income.

Consistent with its older population profile, Gwydir Shire has a high percentage of people with a disability requiring assistance (7.0 per cent), compared to NSW (5.4 per cent). Levels of disability elsewhere in the proposal region are below those typical for NSW.

## **Economic status**

There is a strong association between economic status and health, with economic status being a function of access to work, education, housing and income. Specific population groups commonly experiencing low economic status include Aboriginal people, young people, seniors, migrants and refugees, people with disabilities and homeless people (McKiernan, Young and Copeland, 2005). Entitlement to Pensioner Concession Cards and Health Care Cards is a proxy for low socio-economic status, and includes aged pensioners, people with disabilities, carers and sole parents. The percentage of Pensioner Concession Card holders is higher than typical for NSW, reflecting the age of the population in Gwydir Shire, with 35.6 per cent of people older than 15 years being cardholders. It also reflects the employment limitations in the Moree Plains Shire with 24.8 per cent of the population as cardholders, compared with NSW's 21.9 per cent. Gwydir Shire also has a greater proportion of people in receipt of the aged pension (70.5 per cent of people older than 65 years) than is typical for the State (67.6 per cent).

Health Care Card holders are also more prevalent in the proposal region than is typical for NSW. In the Gwydir and Moree Plains Shires 8.7 per cent and 9.4 per cent (respectively) of the population are cardholders, compared with 6.4 per cent in NSW (PHIDU, 2018).

Unemployment is generally associated with lower income, reduced life opportunities and poorer health and wellbeing. Long-term and intermittent unemployment can have negative effects on health and wellbeing, especially on the mental health of unemployed people and their families (Ibid). The rate of unemployment in Moree Plains Shire is significantly high at 6.9 per cent, compared with 4.8 per cent for NSW and 4.4 per cent in Gwydir Shire. Youth unemployment is high in both Shires with more than 12 per cent of young people aged 15 to 24 years being unemployed.



Housing stress, housing insecurity and homelessness can be significant barriers for residents accessing education, employment and health services.<sup>6</sup> Housing stress from mortgage or rent payments in the proposal region is low compared with NSW, affecting 20 per cent of households in Moree Plains Shire and 11 per cent of households in Gwydir, compared with 29 per cent in NSW. Reflecting the high dependency on income-support benefits in Moree Plains Shire, 22.4 per cent of households here receive rent assistance, well above the State proportion of 17.4 per cent (PHIDU, 2018)<sup>7</sup>. The proportion of households reliant on rent assistance in Gwydir Shire is much lower at 14.9 per cent.

Due to the nature of homelessness, the number of people experiencing homelessness is hard to estimate accurately. Based on Census 2016 data the ABS estimated that on Census night homelessness affected 0.97 per cent of the population in Moree Shire, well above the State level of 0.5 per cent, and contrasting with the relatively low level of 0.25 per cent in Gwydir Shire.

### **General population health**

The following indicators provide an overview into the status of the proposal region's population health.

#### **Self-assessed health**

Self-assessed health status provides a proxy measure of health status and relates to how strongly respondents experience illness and disability. The rate of people assessing themselves as having fair or poor health is higher in Gwydir Shire than in Moree Shire (17.8 people per 100 compared with 15.3 people per 100). Of interest is the rate of estimated self-assessed poor health in Moree Shire is only slightly higher than that the NSW rate of 14.3 people per 100. It is possible that ageing is a factor in the poorer self-assessed health status reported in Gwydir Shire (Ibid.).

#### **Developmental vulnerabilities**

Developmental vulnerabilities in childhood provide a useful indicator of potential long-term effects on a child's later health, wellbeing and academic success. Both Gwydir and Moree Plains Shires have higher representation of school age children who are developmentally delayed than is typical for the State (27.2 per cent and 33.9 per cent compared with 20.2 per cent) or elsewhere in the proposal region (Ibid.).

#### **Self-harm and suicide and mental health**

Death from suicide and self-inflicted injury is an indicator of mental health, particularly among people between 15 and 24 years of age, and 25 and 34 years of age, for whom suicide is a major cause of death. The average annual death from suicide and self-inflicted injuries is 1.7 times higher in Moree Plains Shire than in NSW (at 16.4 people per 100,000, compared with 9.8 in NSW). Data are not available for Gwydir Shire (Ibid.). This higher rate will be influenced by the very high rate reported previously for the Aboriginal population.

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<sup>6</sup> Housing stress occurs where low income households spend more than 30 per cent of their gross income on rent or mortgage payments.

<sup>7</sup> Rent assistance is paid to low-income people in housing need. It is a subsidy paid largely to people in receipt of social security or other income-support benefits from the Australian Government, and who rent in the private rental market, in community housing and in other renting situations.

## **Mental health**

Mental health is a pervasive issue with one in five Australians experiencing a mental health issue in any one year, and almost one in two people in their lifetime (Mental Health Australia and KPMG, 2018.) The most common mental illnesses are depressive, anxiety and substance use disorders, often occurring in combination. Environmental factors can increase the risk of mental illness, including trauma and stress (Australia Health Direct, 2018).

Estimates for mental and behavioural problems in the proposal region are like levels in NSW, at 14.2 people per 100 in Gwydir Shire and 13.8 in Moree Plains compared with 13.1 for NSW. The rate of hospital admissions for mental health related conditions in Moree Plains Shire is lower than that for NSW, at 1,271 admissions per 100,000 people compared with 1,894 per 100,000 in NSW (PHIDU, 2018).

## **Circulatory and respiratory diseases**

Community members have raised concerns about the potential for diesel emissions, coal dust or other particulates from the rail corridor to affect their health. The proposal will not accommodate coal trains.

Diesel emissions contain concentrations of particulate, generally measured and reported as PM<sub>2.5</sub> and PM<sub>10</sub>. PM<sub>2.5</sub> are fine particles and are associated with harmful health effects including cardiopulmonary and respiratory disease and have been declared a carcinogen by the World Health Organisation (NSW Environment Protection Authority website 2018). Inhaling black carbon, present in diesel emissions, can cause damage to lung cells potentially leading to cancer (Rail Safety and Standards Board, 2016.) Potential changes to air quality are considered in EIS Chapter 17: Air quality.

Health indicators relevant to the population at risk of air pollution from fine particulate matter (PM<sub>2.5</sub> and PM<sub>10</sub>) include:

- The level of current respiratory system disease (asthma, chronic obstructive pulmonary disease, bronchitis and other conditions) as an indicator of the population potentially at risk of air pollution from PM<sub>10</sub>
- Coronary heart disease as an indicator of the potential impact of PM<sub>2.5</sub> (noting however that data is currently only reported for all circulatory diseases).

Available information shows that the proposal region's population has a predisposition to some of these illnesses.

At present, modelled estimates for asthma are only available based on 2012 data. As such they can only be considered a crude indication of the population likely to be sensitive to air pollution. Estimated rates of asthma in the Gwydir and Moree Plains Shires are similar at 11.8 and 11.9 people per 100, higher than the rate of 9.6 for NSW.

The reported incidence of lung cancer in Gwydir Shire is low at the rate of 42.7 people per 100,000, but high in Moree Plains Shire where it occurs at the rate of 79.1 people per 100,000, much higher than the NSW rate of 47.0 people per 100,000. (PHIDU, 2018). Moree Plains Shire also has higher rates of hospital admissions for both circulatory and respiratory system diseases than the NSW rates (refer Table 56). Circulatory system disease is not prevalent in Gwydir Shire and data is not available on respiratory system diseases. These results are consistent the relative socio-economic disadvantage of the Moree Plains Shire discussed previously.

**Table 56 Hospital admissions by type**

Area	Circulatory system diseases, persons	Respiratory system diseases, persons
	Rate per 100,000	Rate per 100,000
Gwydir Shire	1,697.1	Not applicable
Moree Plains Shire	2,837.5	2,167.9
NSW	2,101.5	1,917.3

Source: PHIDU Social Health Atlas, 2018. Referencing 2014-15 data.

### 5.7.3 Access to health services

The Remoteness Index of Australia's classifies the proposal region as Outer Regional Australia, characterised as having significantly restricted access to some goods, services and opportunities for social interaction (ABS Accessibility and Remoteness Index, 2018). The study area lies within the Hunter New England Local Health District, a large region extending from Newcastle north to beyond Tenterfield and west beyond Moree. The nearest main service centre in NSW is Moree, over an hour's drive away. Residents instead use Goondiwindi as their main service centre, within 40 minutes from North Star. A protocol between the Queensland and NSW governments provides for collaboration in cross-border service delivery (Cross-Border Commissioner. 2018). Accordingly, key health, police, emergency services and justice facilities that service the study area and nearby communities are in Goondiwindi (including the police, fire and ambulance stations).

Community engagement conducted to date indicates that Goondiwindi is well provided with health services, with the Goondiwindi Hospital (underutilised), and multiple doctors and dentists. However, accessing services is an issue due to a lack of transport and limited financial resources, affecting their health and wellbeing. Given the lack of public transport in the area, most residents depend on private transport to access health and other services. People without private transport are disadvantaged.

Service and program provider consultation at the Boggabilla Community Connect event on 19 October 2018 identified issues regarding local access and delivery of services, including:

- Access to transport to support the referral process
- Challenges maintaining continuity of care in instances where clients are referred to Queensland to access additional services
- Challenges providing NDIS support, where Queensland services providers are closer but NDIS has not yet been rolled out
- Difficulties providing accurate diagnoses and treatment of complex health needs where multiple services are required.

Consultation with Toomelah Health Centre also identified the cost of accommodation as another barrier to accessing health services in Queensland and NSW.

Data on potentially preventable hospitalisations is a proxy indicator of access to primary health care (including by general practitioners, medical specialist, dentists, nurses and allied health professionals), indicating where hospitalisation could have been potentially avoided with access to appropriate individualised preventative health interventions and early disease management.

The data confirms the difficulty any in the community have in accessing services with preventable hospital admissions in Moree Plains and Gwydir LGAs occurring at 1.2 times the average rate that occurs in NSW.<sup>8</sup>

#### **5.7.4 Domestic and family violence**

Domestic and family violence refers to physical, sexual, economic, psychological, verbal or emotional abuse. It has a significant immediate and longer-term impacts on the health and well-being of victims, with exposure leading to poorer physical health overall, and an increased risk of health problems (World Health Organization (2000). The reasons for domestic violence are complex. However, contributing factors include drug and alcohol abuse, irregular or intermittent work, mental health issues, stress and historical trauma. It should also be noted that many incidents of domestic and family violence go unreported and so the data is likely to be understated.

Domestic and family violence occurs at significantly higher rates in Aboriginal communities at about twice the rate of non-Aboriginal communities. However, it is important to note that there is great diversity, and domestic and family violence does not affect all communities equally (Taton et al, undated).

Moree Plains LGA recorded the second highest incidence of family and domestic violence in NSW in 2017/18, with incidents occurring at 3.8 times the state-wide rate, and 4 times the rate in Gwydir Shire (equivalent to 1,422.2 people per 100,000 in Moree, 356.7 per 100,000 in Gwydir and 370 per 100,000 in NSW) (NSW Police Service, 2018). This high rate is likely to be influenced by the even higher rate of occurrence within Aboriginal communities.

#### **5.7.5 Community safety**

Feeling unsafe can influence levels of anxiety and can be a barrier to community participation and accessing services. A measure of perceived safety is taken nationally, focusing on whether people feel safe to walk alone after dark in their local area. Using this criterion, residents in Gwydir Shire feel a high level of safety when compared to the level typical for NSW (69.7 people per 100 compared with 53.4), whereas residents of Moree Plains Shire feel less safe (at 51 people per 100) (PHIDU, 2018).

This lack of perceived safety in Moree Plains LGA is consistent with the high reported crime levels there. Moree Plains LGA has the highest rate of motor vehicle theft and sexual offences per 100,000 people of all Local Government Areas in NSW, and the second highest rate of assault and domestic violence related assault per 100,000 people (refer Table 57).

Postcode 2408 includes the settlement of North Star and Postcode 2409 includes the settlements of Boggabilla and Toomelah. These smaller area data show some variation on the broader LGA data, with a lesser but still high rate of assault (non-domestic violence) and sexual offences in Postcode 2409 and a higher rate of motor vehicle theft in Postcode 2408.

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<sup>8</sup> Equivalent to 3,036.3 per 100,000 people in Gwydir LGA, 3,288.9 for Moree Plains LGA, and 2,564 for NSW State. PHIDU (ATSI and LGA). 2018. Referencing 2014/15 data.

**Table 57 Criminal Incident by location and rank**

Criminal incident per LGA	Rate per 100,000 population	Rank (120 LGAs)	Rate per 100,000 Range by Post Code*
<b>Assault (non-domestic violence)</b>			
<b>Gwydir LGA</b>	281.6	86	0 – 633.3
<b>Moree Plains LGA</b>	1,317.1	2	633.6 – 1,036.2
<b>NSW State</b>	416.0	n/a	
<b>Domestic violence related assault</b>			
<b>Gwydir LGA</b>	356.7	65	0 – 321.1
<b>Moree Plains LGA</b>	1,611.5	2	985.4 – 1,707.8
<b>NSW State</b>	367.7	n/a	
<b>Sexual offences</b>			
<b>Gwydir LGA</b>	187.8	63	0 – 105.7
<b>Moree Plains LGA</b>	625.5	1	343.2 – 601.5
<b>NSW State</b>	173.7	n/a	
<b>Motor vehicle theft</b>			
<b>Gwydir LGA</b>	131.4	76	314.3 – 542.4
<b>Moree Plains LGA</b>	868.3	1	>542.4
<b>NSW State</b>	170.4	n/a	

Source: <http://perpercrimetool.bocsar.nsw.gov.au/perbocsarper>.

\*Predominantly in Moree Plains LGA – partially in Gwydir LGA. 2408 (in Gwydir LGA) 2409 (in Moree Plains LGA).

## 5.7.6 Traffic safety

### Road safety

The study area lies within the Western NSW Roads and Maritime Services (RMS) region of the Department of Transport. In the period 2011 to 2015 there were 5,463 reported road accidents in this region, 3.7 per cent of which were fatal, 37.4 percent resulted in serious injury and 58.9 per cent resulted in moderate injury. Only 9.9 per cent of accidents involved Aboriginal casualties. The rate of fatalities and serious injury were lower than the NSW rate (2.4 and 41.2 per cent respectively), while moderate injuries were higher (58.9 per cent) (Transport for NSW, 2017).

By contrast, data available at the local government level shows that Moree Plains Shire had a high number of deaths from road traffic injuries compared to the NSW average (nine people per 100,000 per year compared with 4.1) (PHIDU, 2018, referencing 2011-2015 data). This suggests there is a greater risk of road accident fatalities in Moree Plains Shire than elsewhere in the Western RMS region. Data has not reported for Gwydir Shire.

### Rail safety

The main traffic safety risks associated with rail transport include derailments, level crossing accidents with road-based vehicles, accidents associated with passenger per pedestrian slips and falls, and railway suicide and assaults.

Freight train derailment risk has a higher frequency occurrence than passenger train derailment. Derailments expose train crews and recovery teams to risk of harm, and depending on the location, members of the public. There were 30 running line derailments nationally involving freight trains nationwide in 2016 and 2017 (Office of the National Rail Safety Regulator (2017). State-based data are not available.

National rail statistics data shows that from 2002-12, NSW had a low normalised rate of road vehicle collisions at level crossings when compared with the other States and Territories (0.16 per million train kilometres travelled per year in NSW compared with Tasmania at 3.77, Northern Territory (NT) at 0.61 and Victoria (VIC) at 0.53; and QLD at 0.4). Over the same period, NSW had a total of 110 rail fatalities (this data has not been normalised by kilometres travelled) (Australian Transport Safety Bureau, 2012).

## 6 Stakeholder engagement

Stakeholder engagement is central to the SIA process. The SIA engagement process was integrated with ARTC's engagement process for the EIS and included SIA-specific engagement activities. This section summarises ARTC's consultation, the SIA engagement process, stakeholder issues identified, and stakeholder inputs to mitigation of social impacts. The Consultation Summary prepared for the EIS (refer Appendix D: Consultation summary) provides a detailed account of ARTC's engagement process and outcomes.

### 6.1 EIS engagement process

ARTC's objectives for stakeholder engagement are to:

- Build trust, including ensuring stakeholders are aware of the project, design phases and timeframes, and understand the mechanisms for input and consultation
- Build credibility, including ensuring engagement is transparent, equitable and inclusive and iterative, with adequate opportunities for stakeholders to comment
- Build visibility, including creation of ongoing dialogue with stakeholders, and ensuring appropriate information is escalated through dialogue with the Inland Rail Program team.

ARTC consultation activities which informed the development of the SIA included:

- Meetings with directly impacted landowners to present the focused area of study and discuss potential impacts on their properties
- Community information sessions at North Star, Boggabilla, Toomelah and Goondiwindi to provide information about the study area and the draft flood model, and seek inputs to the SIA
- Meetings with GRC, MPSC, Toomelah Boggabilla LALC and affected landowners to verify the calibration of existing flood conditions, and receive feedback on the calibrated flood model map and flood hydrological report
- NS2B Community Consultative Committee meetings
- A meeting between the Inland Rail CEO, directly impacted landowners and the Mayor of GRC to hear their concerns regarding the proposal's alignment.

Key issues addressed in the proposal design and in the SIA in response to stakeholder inputs are as follows.

#### Alignment selection

Community members and GRC questioned the process undertaken to choose the proposal alignment. In response, ARTC facilitated an independent evidence-based compliance review of the MCA process used by Inland Rail to provide more certainty about the methodology used during the alignment selection process, committed to continuing workshops regarding flood modelling, and has conducted ongoing engagement with key stakeholders regarding the alignment's direct impacts on land. Stakeholders including GRC are still opposed to the proposal's alignment, across the Macintyre River, fearing flooding impacts and the loss of productive agricultural land (refer below). Impacts on private land are discussed in the SIA Section 7.1.2.



## **Flooding**

Concerns about potential flooding impacts are a significant issue of concern to local communities, with the crossing of the Macintyre River floodplain of concern. ARTC has facilitated several technical flood model workshops to verify the calibration of the flood model against historic events and seek endorsement of the flood model. Consultation with GRC and landowners indicates that flooding remains an issue of strong concern and is further discussed in Section 7.2.5.

## **Impacts on farms and agribusinesses**

Impacts on the operation of agricultural properties is a key issue for affected landowners and other community members who depend on the operation of farms and agribusinesses. Impacts on each property and the mitigation of impacts has been the focus of a series of meetings with landowners, as detailed in Appendix D: Consultation summary.

Impacts on farms and businesses are addressed in EIS Chapter 22: Land use and property, and in Sections 7.2.3 and 7.4.3.

## **Construction workforce accommodation camp**

ARTC proposes to establish a temporary workers' accommodation facility in North Star, located at the North Star Sports Club. ARTC have held early and ongoing consultation with the North Star Sports Club, seeking their feedback and input into the design development and proposed mitigations required to minimise impacts on the facility and its use. Consultation indicates the Club's support for the location of the accommodation facility. ARTC has also completed a comprehensive, targeted round of engagement in North Star area, to ensure concerns and issues relating to the proposed workers' accommodation facility were identified and addressed through the EIS (refer Section 7.5.1).

## **Construction hours**

ARTC proposes construction hours of 6.30 am to 6.00 pm seven days per week. ARTC has consulted residents in North Star where dwellings and community facilities would be near construction activities. Consultation indicated a level of support for these construction hours, with reservations regarding noise, as discussed in Section 7.1.2, as discussed in Section 7.5.1.

## **6.2 Social Impact Assessment engagement**

The purpose of SIA engagement was to ensure that inputs from directly affected stakeholders and other community members informed the social baseline, impact assessment and mitigation development.

SIA stakeholder engagement commenced with identification of stakeholders and their interests, which included:

- Reviewing the outcomes of ARTC's stakeholder engagement to date
- Reviewing the location of the proposal in relation to rural properties and communities
- Participation in community drop-in sessions to discuss the scope of potential impacts and opportunities
- Desktop analysis of social infrastructure provision and management in the area of social influence
- Identifying Council departments and Government agencies with an interest in the SIA.

The SIA engagement process is outlined in Table 58.

**Table 58 Social Impact Assessment engagement**

Stakeholder Groups	Objectives	Engagement
<b>Directly impacted landowners</b>	<ul style="list-style-type: none"> <li>■ Discuss scope of potential impacts</li> <li>■ Obtain land holder input on potential impacts, benefits and mitigations.</li> </ul>	<ul style="list-style-type: none"> <li>■ Landowner workshop</li> <li>■ SIA also incorporates analysis of the results of CCC meetings which represent landowners.</li> </ul>
<b>Aboriginal community members</b>	<ul style="list-style-type: none"> <li>■ Identify community values</li> <li>■ Seek inputs on opportunities for economic and community development</li> <li>■ Identify potential impacts and benefits.</li> </ul>	<ul style="list-style-type: none"> <li>■ Toomelah Boggabilla Local Aboriginal Land Council (LALC) Cultural Heritage and SIA Meeting.</li> </ul>
		<ul style="list-style-type: none"> <li>■ Toomelah Community Drop-in Session.</li> </ul>
		<ul style="list-style-type: none"> <li>■ Moree Plains LALC Cultural Heritage and Social Impact Assessment Meeting.</li> </ul>
<b>Landowners and community members</b>	<ul style="list-style-type: none"> <li>■ Provide a briefing on draft SIA findings – impacts, opportunities and mitigations identified - for discussion with Councils and seek feedback.</li> </ul>	<ul style="list-style-type: none"> <li>■ Toomelah Boggabilla LALC workshop on draft EIS and SIA findings – assessment and mitigations.</li> </ul>
		<ul style="list-style-type: none"> <li>■ Provide information about the proposed alignment and EIS process</li> </ul>
		<ul style="list-style-type: none"> <li>■ North Star Community Drop-in Session.</li> </ul>
		<ul style="list-style-type: none"> <li>■ Boggabilla Community Drop-in Session.</li> </ul>
<b>Local Governments - Moree Plains Shire, Gwydir Shire and Goondiwindi Region</b>	<ul style="list-style-type: none"> <li>■ Enable community members to contribute their views on the scope of potential social impacts and benefits</li> <li>■ Collect information on social baseline values.</li> </ul>	<ul style="list-style-type: none"> <li>■ Goondiwindi Community Drop-in Session.</li> </ul>
		<ul style="list-style-type: none"> <li>■ Toomelah Community Drop-In Session.</li> </ul>
		<ul style="list-style-type: none"> <li>■ GRC meeting with Council staff.</li> </ul>
	<ul style="list-style-type: none"> <li>■ Discuss the SIA scope and seek inputs on local issues and the focus of assessment</li> <li>■ Provide an update on the EIS process and schedule.</li> </ul>	<ul style="list-style-type: none"> <li>■ MPSC meeting with Council staff.</li> </ul>
		<ul style="list-style-type: none"> <li>■ GSC meeting with Council staff.</li> </ul>
		<ul style="list-style-type: none"> <li>■ GRC Meeting with Mayor, Councillors and staff.</li> </ul>
	<ul style="list-style-type: none"> <li>■ Provide a briefing on draft SIA findings – impacts, opportunities and mitigations identified – for discussion with Councils and seek feedback.</li> </ul>	<ul style="list-style-type: none"> <li>■ GSC Meeting with Mayor, Councillors and staff.</li> </ul>
		<ul style="list-style-type: none"> <li>■ MPSC Meeting with Mayor, Councillors and staff.</li> </ul>

Stakeholder Groups	Objectives	Engagement
<b>Community and Government agencies</b> <b>NSW Education</b> <b>NSW and Queensland Health, NSW Police</b> <b>NSW Ambulance</b> <b>NSW Fire and Rescue Service (FRS)</b> <b>Indigenous service providers (including Toomelah Public School and Toomelah Health Clinic)</b>	<ul style="list-style-type: none"> <li>Collection information on social baseline values as they relate to social infrastructure</li> <li>Potential implications of the proposal for the provision of community, health and emergency services.</li> </ul>	<ul style="list-style-type: none"> <li>Social infrastructure providers' workshops in Warialda and Boggabilla</li> <li>Meetings with service providers and community members at Boggabilla Community Connect event</li> <li>Interviews with Toomelah school principal and health clinic staff.</li> </ul>
<b>Businesses and business organisations</b>	<ul style="list-style-type: none"> <li>Identify businesses' (including farmers') views on potential impacts and opportunities.</li> </ul>	<ul style="list-style-type: none"> <li>Participation in Community Drop-in Sessions and Landowner Workshop</li> <li>Meeting with Goondiwindi Chamber of Commerce.</li> </ul>
<b>Community and environmental organisations</b>	<ul style="list-style-type: none"> <li>Seek community organisations views on potential social impacts and mitigation partnerships.</li> </ul>	<ul style="list-style-type: none"> <li>Participation in ARTC Community Drop-in Sessions</li> <li>Boggabilla Community Connect Event.</li> </ul>

### 6.3 Stakeholder issues

Table 59 lists the key stakeholder groups for the SIA and summarises the key issues identified by stakeholders, which have been considered in identifying social impacts and benefits. Issues such as water, traffic and biosecurity are addressed in detail in relevant sections of the EIS and, where relevant to social impacts and benefits, in the SIA.

**Table 59 Stakeholder profile**

Stakeholders	Issues raised in consultation
<b>Landowners - greenfield section</b>	<ul style="list-style-type: none"> <li>Opposition to the location of the proposal alignment which is being assessed, and to the process which determined the alignment</li> <li>Landowners feel inadequately represented in the decision making process for the alignment</li> <li>Questions about EIS assessment process particularly regarding flooding issue</li> <li>Evidence of benefits for local communities</li> <li>Impacts of property severance/boundary alignment on prime agricultural land, farms employment and farm infrastructure</li> <li>Concerns about the Macintyre River Crossing, and the potential for effects on flood risks</li> <li>Concern regarding the movement of cattle and machinery across the railway line</li> <li>Potential for safety risks to stock from construction traffic or construction equipment</li> <li>Loss of property amenity due to noise or dust, or visual amenity impacts</li> <li>Potential for a decrease in land values</li> <li>Potential for the changes to water access, through changes to groundwater levels, flooding patterns or access to water allocations</li> <li>The length of bridges structures proposed.</li> </ul>

Stakeholders	Issues raised in consultation
<b>Landowners - brownfield section</b>	<ul style="list-style-type: none"> <li>■ Concern about vehicular access and safety</li> <li>■ Severance of land resulting in impacts on the viability of agricultural businesses</li> <li>■ Farm pipelines and utilities currently buried under the railway line may be damaged</li> <li>■ Disruption of stock cattle operations, including stock crossings</li> <li>■ Potential for decrease in land values</li> <li>■ Potential for loss of access to higher ground within the corridor used by landowners and community members to protect stock and equipment during a flood</li> <li>■ Impacts on Travelling Stock Reserves</li> <li>■ Management of land access arrangements including appropriate protocols with landowners</li> <li>■ Whether the redundant rail line in the existing rail corridor was to be removed (this is outside the scope of the proposal).</li> </ul>
<b>Moree Plains Shire Council</b> CEO Executive Projects Manager Directors	<ul style="list-style-type: none"> <li>■ Combination of skilled/unskilled labour available that could be utilised by the proposal</li> <li>■ Concern for community safety at level crossings</li> <li>■ Impacts of roadworks and road closures on travel times and safety during construction</li> <li>■ Wait times for emergency services and other vehicles at level crossings</li> <li>■ Biosecurity concerns through the accidental transfer of pests and diseases</li> <li>■ Build-up of debris during and after flooding events</li> <li>■ Connectivity of roads and formal and informal stock/equipment crossings</li> <li>■ Benefits for businesses with potential/capacity to engage with the proposal.</li> </ul>
<b>Gwydir Shire Council</b> Mayor, Councillors, Executive Manager, Social Service Manager, Town Planner	<ul style="list-style-type: none"> <li>■ Benefits include taking freight off roads and reducing freight costs for local businesses</li> <li>■ Unemployment is low in the LGA, but the proposal represents an opportunity to diversify the employment base</li> <li>■ Interest in proposal recruitment strategies, workforce management plans and commute arrangements during construction</li> <li>■ Workforce accommodation camp at North Star would be a boost for the local sporting club</li> <li>■ North Star has limited public and community infrastructure</li> <li>■ Interest in crossings at North Star Rd and Forest Creek Rd in relation to potential impacts on traffic flows</li> <li>■ Interest in proposal impacts and/or management of travelling stock reserves</li> <li>■ Impacts of construction transport on local road networks and road conditions</li> <li>■ Support for increased community safety and awareness raising regarding the proposal's operation</li> <li>■ Continuity of availability of local roads.</li> </ul>

Stakeholders	Issues raised in consultation
<b>Goondiwindi Regional Council</b> Mayor CEO Director Community and Corporate	<ul style="list-style-type: none"> <li>Short-term accommodation is in high demand and there is an existing shortage</li> <li>Council is opposed to the project's location, believing another option for the alignment was preferable</li> <li>Council believes the EIS has underestimated potential flooding risks and that the levee bank protecting Goondiwindi would be insufficient to protect the town if flooding increases</li> <li>Council believes the bridge solutions are inadequate to prevent exacerbation of flooding and impacts on the Macintyre River floodplain</li> <li>Community concern regarding the project's potential to impact on their access to water which is integral to agricultural businesses</li> <li>Potential for traffic increases in North Star Road to affect use by farm transport vehicles, particularly at harvest times</li> <li>Concerns regarding an increased risk of bush fires</li> <li>Council has limited landfill capacity at Yelarbon</li> <li>Licensing opportunities for local quarries so they can be utilised for future Council projects</li> <li>Implications for movement of machinery and stock across the rail alignment</li> <li>Impacts on access and community safety at level crossings</li> <li>Local employment opportunities and on-the-job training</li> <li>Opportunity to get more local produce on the Western Railway Line</li> <li>Potential benefit of the proposal drawing on local services i.e. workers, ballast from local quarries, gravel puts, borrow puts, steel workers and fabrications.</li> </ul>
<b>Moree LALC</b>	<ul style="list-style-type: none"> <li>Opportunity to use resource materials from the local quarry near Pallamallawa for the proposal</li> <li>Potential employment opportunities during construction for the local indigenous population</li> <li>Maintenance of vehicular connections will be critical.</li> </ul>
<b>Toomelah community</b> Toomelah Boggabilla LALC Toomelah Health Community Centre Toomelah Community Information Session	<ul style="list-style-type: none"> <li>Strong attachment to the cultural, recreation and environmental values of the Macintyre River</li> <li>Concern that use of remnant vegetation for bush tucker and natural medicine will be lost</li> <li>Potential for impact on burial sites and other culturally significant places</li> <li>Concerns about flooding and evacuation capacity in the event of a flood</li> <li>Opportunity for on-the-job training to increase employability</li> <li>Concern that children, young people or people seeking suicide will access the rail corridor and be harmed</li> <li>Concern about the impact of the railway line on access between Boggabilla/Goondiwindi and Toomelah, particularly for emergency services</li> <li>Concern about further isolation of the community</li> <li>Keen interest in participation in proposal employment and supply chain</li> <li>Concern regarding the impacts of noise on children on the autism spectrum.</li> </ul>
<b>North Star Community</b> Residents North Star Sporting Club	<ul style="list-style-type: none"> <li>Potential for Moree to serve as an intermodal hub, creating additional jobs and sustaining the transport workforce</li> <li>Rail freight will be more efficient and cost effective for local producers</li> <li>Connectivity across the rail line is a significant concern, including TSR management implications e.g. herding cattle and getting large machinery across the railway corridor</li> <li>Concern about exacerbating flooding impacts on Toomelah</li> <li>Noxious weed and seed control</li> <li>The North Star Sporting Club could benefit from proposal investment through encouraging workforce use of the club.</li> </ul>

Stakeholders	Issues raised in consultation
<b>Boggabilla community</b> Residents Community Health Service Boggabilla Central School NSW Police, F&R & Ambulance	<ul style="list-style-type: none"> <li>Connectivity and interfaces with road and rail will be critical from an efficiency and safety perspective</li> <li>Concern about the potential impact of the railway line on access between Boggabilla and Toomelah</li> <li>Impacts of the railway line on community safety, particularly concerning children climbing fences and playing on the tracks</li> <li>Noise from the railway line on the Toomelah community is a significant concern</li> <li>Interest in how to maximise proposal benefits for Boggabilla community.</li> </ul>
<b>Businesses</b> Landowners, engineering and retail businesses, Goondiwindi Chamber of Commerce	<ul style="list-style-type: none"> <li>Business opportunities identified by stakeholders included fencing, earthworks, construction material supply, water supply, and borrow pit material</li> <li>Opportunity for local businesses to service the workforce accommodation camp e.g. cleaning and cooking,</li> <li>Opportunity for the shop in North Star to re-open more regularly to service residents and the workforce</li> <li>Opportunity for a local business to establish a fuel depot in North Star</li> <li>Facilitation of intermodal hub facilities in the Goondiwindi, Moree and Gwydir regions.</li> </ul>
<b>Health Services</b> Toomelah Community Health Centre Warialda Multipurpose Centre Goondiwindi Hospital	<ul style="list-style-type: none"> <li>North Star has no local health services</li> <li>Only health service capacity to service construction workforce is in Goondiwindi, which provides access to a broad range of health services (GP, Hospital, Pharmacy, Pathology, Radiology) for residents of all nearby communities</li> <li>Toomelah Community Health Centre provides a holistic approach to health care but with limited funding, no community transport, limited telecommunications/internet infrastructure and challenges with cross-border referrals</li> <li>Transport and finances are major barriers for Toomelah residents accessing health care</li> <li>Toomelah described as currently living in grief, responding to high mortality rates</li> <li>Drug use and high alcohol consumption among young people (18-35 years) in Toomelah</li> <li>A lot of local young people are at risk of suicide, and the proposal may increase risk.</li> <li>Proposal represents opportunity for employment and community development initiatives</li> <li>Older population health and asthmatics may be vulnerable during the proposal's construction phase</li> <li>Young children's potential to wander unsupervised and implications for safety.</li> </ul>
<b>Emergency services</b> NSW Police NSW F&R NSW Ambulance –	<ul style="list-style-type: none"> <li>Except for police and RFS based at Boggabilla, emergency service resources are limited in the study area, and NSW ambulance services</li> <li>Challenges with cross-border service provision – Goondiwindi is closer to the proposal but some limitations in jurisdiction.</li> <li>QFES has a Memorandum of Understanding to respond in NSW\</li> <li>NSW RFS has established protocol with ARTC</li> <li>Current capacity to service construction workforce, if based at North Star, is limited</li> <li>Need for community rail safety awareness.</li> <li>Impacts to community safety and proposal security risks associated with access to tracks, trespass, vandalism, accidental injury, theft</li> <li>Opportunity for joint onsite training exercises for road/rail incidents for police, ambulance and local fire brigades.</li> </ul>

Stakeholders	Issues raised in consultation
<b>Department of Education</b> North Star Public School Toomelah Public School Boggabilla Central School	<ul style="list-style-type: none"> <li>■ Opportunity for school excursions to look at different proposal activities / interesting jobs/careers</li> <li>■ Potential for rail noise to impact on Toomelah school</li> <li>■ Potential for noise and vibration impacts on North Star school learning environment</li> <li>■ Impacts to North Star community safety associated with student access to North Star Road.</li> </ul>

## 6.4 Stakeholder inputs on mitigations

Stakeholders consulted as part of the SIA process provided suggestions regarding mitigation of potential impacts and enhancement of community benefits (refer Table 60). These suggestions have been considered in developing the proposal's SIMP (refer Section 8).

SIA engagement included a presentation of the SIA's preliminary findings and proposed mitigations (to the MPSC, GSC and GRC and the Toomelah Boggabilla LALC, to brief them on the SIA's preliminary findings and the mitigations being proposed.

The assessment of social impacts and proposed mitigations received general agreement from the three Councils and the LALC. Feedback included the need for ongoing engagement with the three Councils and the LALC to ensure that they are involved in refining mitigations such as promotion of opportunities for training, employment and supply to the proposal, road interface treatments and servicing requirements relating to the proposed workforce accommodation camp in North Star.

**Table 60 Stakeholder inputs on mitigation and enhancement strategies**

Issue	Stakeholder inputs on mitigation and enhancement
<b>Property management</b>	<ul style="list-style-type: none"> <li>■ Ensure landholder liaison have local knowledge and continuity in relationships and information management to ensure effective issues management</li> <li>■ Landholder access to high quality mapping, construction plans as relevant to each property, information and agreements about fencing, machinery and stock crossings</li> <li>■ Real time access to train schedule</li> <li>■ Cooperation with other stakeholders regarding overland water flow management</li> <li>■ Potential legacy opportunities through the beneficial re-use of the existing non-operational railway line to Boggabilla.</li> </ul>
<b>Community engagement</b>	<ul style="list-style-type: none"> <li>■ Ensure the provision of regular, accessible information about the proposal to community members to support their ability to cope with changes</li> <li>■ Communication strategies to ensure stakeholders know about construction traffic routes, peak construction periods, and how to contact the proposal staff</li> <li>■ Careful and consistent communication with Toomelah residents to ensure concerns and difficulties caused by changes to their local environment are addressed</li> <li>■ Consultation with the Toomelah community to identify potential business opportunities and associated community development programs.</li> </ul>
<b>Housing and accommodation</b>	<ul style="list-style-type: none"> <li>■ Further engagement will be required with GSC regarding the proposed construction workforce accommodation camp</li> <li>■ Further information to GSC on the proposal, road management and accommodation management strategies will be required as the detailed progresses</li> <li>■ Opportunity for proposal use of vacant housing in North Star and/or Croppa Creek.</li> </ul>



Issue	Stakeholder inputs on mitigation and enhancement
<b>Employment and training</b>	<ul style="list-style-type: none"> <li>■ Work with local councils, LALCs and employment agencies on lead-in programs for education and training</li> <li>■ Local indigenous employment targets</li> <li>■ Workforce commute arrangements by bus</li> </ul>
<b>Access to services and facilities</b>	<ul style="list-style-type: none"> <li>■ Involvement of North Star Public School as community hub and information conduit</li> <li>■ Fencing for North Star Public School</li> <li>■ Re-orientation of North Star Public School access (create new primary access from David Street)</li> <li>■ Comprehensive on-site service provision at accommodation camp</li> <li>■ Early advice to NSW agencies regarding workforce ramp-up</li> <li>■ Protocol development for police and ambulance services</li> <li>■ Potential for proposal to provide water storage tanks to replace severed access points to water for fire fighting</li> <li>■ Opportunity for joint incident response exercises</li> <li>■ Consider investment in positive legacy items for North Star</li> <li>■ Consideration of the use of online/app-based information on train times.</li> </ul>
<b>Community health and wellbeing</b>	<ul style="list-style-type: none"> <li>■ Opportunity to work with the Toomelah community to enable access to employment opportunities</li> <li>■ Establish a Communication and Engagement Agreement with Toomelah Boggabilla LALC, Toomelah Elders, and other nominated community leaders</li> <li>■ Support for road and rail safety awareness programs</li> <li>■ Support improvements in telecommunications in the proposal region</li> <li>■ Engage Connected Communities Boggabilla/Toomelah steering committee on mitigations and considerations for future service provision</li> <li>■ Regular engagement and participation of Toomelah community in proposal planning</li> <li>■ Maintain/offset access to natural resources impacted by proposal.</li> </ul>
<b>Businesses</b>	<ul style="list-style-type: none"> <li>■ Opportunity to use resource materials from local quarries</li> <li>■ Opportunity for increased business activity at North Star Sporting Club</li> <li>■ Potential for Moree to serve as an intermodal hub, creating additional jobs</li> <li>■ Skills and supply audits to determine local capacity and identify gaps and opportunities</li> <li>■ Support local business incubation strategies for Boggabilla/Toomelah businesses.</li> </ul>

## **7 Potential impacts and benefits**

This section discusses the proposal's potentially material social impacts and benefits.

### **7.1 Surroundings**

The proposal's potential impacts on the settlement pattern, amenity, connectivity and access to natural resources are outlined below.

#### **7.1.1 Settlement pattern**

The SA1s within which the proposal is located have a dispersed residential population. The proposal would not have any direct interface with urban centres, however it would have impacts on rural land holdings with a range of productive agricultural values.

In adopting a brownfield corridor for all but a 5 km section of the proposal, changes to the settlement pattern are likely to be minimal.

The proposal would result in severance of agricultural lots which may see a loss of function for severed portions and therefore affect their permanent use for agriculture (refer Section 7.2.3). EIS Chapter 22: Land use and property provides a detailed assessment of impacts on agricultural land uses.

At the broader regional level, the proposal's freight transport opportunities may stimulate establishment of businesses or industry precincts (such as intermodal facilities or logistics hubs) which may increase use of and/or demand for industrial and light industrial land. Employment generated by business or hubs facilitated by the proposal may also increase demands for housing, most likely in Moree or Goondiwindi. The potential reduction in road freight volumes over time may also reduce the amenity impacts of road transport routes and support future urban regeneration near some routes.

#### **7.1.2 Amenity and character**

The proposal has the potential to impact upon the amenity of people living near the study area during construction and operation. Areas of concern raised by stakeholders included construction and operational noise impacts on the amenity of homes and properties, changes to air quality, and impacts on rural character. This included the potential for proposal components such as the construction accommodation camp or crossing loops to result in noise impacts.

##### **Construction noise and vibration**

Noise from construction of the rail track and associated infrastructure is likely to be intrusive on the quiet rural amenity experienced near the study area but would be transitory as construction activities move along the corridor, so particular places may only be temporarily affected. Any noise impacts from laydown areas of the construction of bridges would last for longer periods.

The dispersed nature of the population near the study area and the location of the proposal along property boundaries has minimised the potential for noise or dust impacts to affect landowners near the rail corridor. Roadworks to reinstate or create level crossings and to realign Bruxner Way will also be in areas where there is minimal potential to impact on sensitive receptors.

The nearest communities, which have potential to experience construction noise, are Toomelah and North Star.

At more than two km from Toomelah, noise and dust from track construction are unlikely to affect residents (noting that the potential for noise from the study area to affect people on the autism spectrum was raised and is discussed in Section 7.7.4). The nearest laydown area to the Toomelah community is also approximately 2 km to the west with no potential to result in dust or noise impacts in Toomelah.

Laydown areas and a temporary construction workforce accommodation camp would be in the North Star village, and there is potential for noise to emanate from these sources.

ARTC has consulted with the North Star community (via a survey, door-knock meetings and a community drop-in session) regarding the proposed construction hours i.e. seven days/week, 6.30 am to 6.00 pm (refer Appendix D: Consultation summary for more detail). Community members who participated were generally supportive of the proposed roster, but some had concerns about construction noise or dust, and the lack of respite from noise. There was also concern that the actual experience of noise would change people's support for the proposed construction hours.

The assessment of noise associated with the construction of the proposal (Appendix J: Construction and noise vibration) indicates the potential for exceedances of the noise management levels at some dwellings in North Star during construction. The assessment indicates that up to three dwellings may be highly affected by noise during both daytime and night-time hours as a result of earthworks, drainage works and/or rail civil works (noting that this is representative of the worst case 15 minute period of construction activity, and does not represent the ongoing day to day noise impact at noise sensitive receivers for an extended period of time). Noise resulting from the construction accommodation camp in North Star is not expected to cause any exceedances of noise levels at nearby dwellings.

There is also potential for night works to cause noise which would exceed the 'awakening reaction criterion' for up to seven dwellings at different times. This will need to be addressed through close consultation with potentially affected residents to identify and implement mitigations which avoid sleep disturbance.

In addition to standard measures, Appendix J: Construction and noise vibration recommended management and mitigation measures which will be considered in the contractor's Construction Noise and Vibration Management Plan (CNVMP).

These measures are likely to reduce noise impacts, but some North Star residents are likely to experience construction noise as a detraction from the amenity of homes and public areas while construction works occur in the vicinity. Noise may also affect the lifestyle of North Star residents if they are reluctant to go outside whilst noisy works are occurring or need to keep their windows shut to reduce noise.

During construction, ARTC will consult regularly with the North Star community and residents living near the alignment (within approximately 500 metres) regarding construction noise. ARTC will also remain responsive to community complaints about noise and other proposal impacts, including provision of contact details for proposal personnel who can modify construction activities to reduce noise impacts at the source (e.g. baffling of equipment or suspension of noisy activities) in response to complaints. If residents identify noise that is causing stress or sleep disturbance, ARTC will modify construction activities to reduce noise exposure.

ARTC will also engage with the North Star residents if critical works or night works are required outside of the proposed seven-day roster to provide information about the nature and duration of works, and ensure stakeholders have access to 24-hour contact details for proposal personnel who can mitigate noise impacts at the source.

Vibration intensive work (e.g. piling and vibratory rolling) is also likely to be undertaken as part of the construction works.

A Noise and Vibration Management Sub-plan will be developed as a component of the construction environmental management plan. This Sub-plan will include:

- Construction noise and vibration criteria for the proposal.
- Location of sensitive receivers in proximity to the construction area
- Specific management measures for activities that could exceed the construction noise and vibration criteria.

### **Operational noise and vibrations**

The operation of the railway would also result in the generation of noise, as addressed in EIS Chapter 16: Noise and vibration. The rail noise levels for the daytime and night-time periods were predicted for two scenarios, the year 2025 and the year 2040, to identify where noise levels could trigger the investigation of feasible and reasonable noise mitigation measures.

The assessment of predicted rail noise determined that daytime and night-time predicted noise levels did not trigger an investigation of noise mitigation at most sensitive receptors. For three receptors (houses) within 200 m of the rail corridor, the predicted noise levels triggered the investigation of noise mitigation, and the owners of these properties would be eligible for the consideration of architectural acoustic treatment of the dwellings and upgrades to any existing property boundary fencing. ARTC is consulting with the owners of the properties affected and will continue to consult with them to agree property-specific mitigations, which could include assistance for the relocation of homes on the same land parcels.

Stakeholders raised the possibility that the proposal's crossing loop, where trains would wait for other trains to pass, could have effects on the amenity of nearby landowners through noise or air quality changes. The crossing loop is an approximately 2.2 km section of single line, standard gauge track, running roughly parallel to the main track. The crossing loop would accommodate trains up to 1,800 m however it is also futureproofed to accommodate trains up to 3,600 m if required at a future time.

Based on the reference design, a feasible location for the crossing loop is between Ch 22.7 km and Ch 24.9 km, however this location is subject to change as the optimisation process (which will consider crossing loop locations program-wide) progresses. Based on the current location, there are no sensitive receptors where noise limits would be exceeded in relation to the crossing loop (refer Appendix K: Operational noise and vibration).

A conservative assessment of potential ground-borne noise levels as the result of vibrations emanating from the rail line during operation determined that the rail operations would achieve the ground-borne noise trigger levels at all sensitive receptors (refer Appendix K: Operational noise and vibration). On this basis, impacts of vibration on sensitive receptors are not anticipated during the proposal's operation.

Noise from the proposal's operation may be experienced by nearby residents as intrusive, regardless of regulatory compliance, given the existing quiet character of the study area. ARTC will respond to any complaints about rail noise or vibration which residents report is affecting their quality of life, including investigation of noise levels in any sections of the track which are identified as problematic, and consideration of mitigation measures (such as specific track maintenance activities) which could reduce noise levels.

## Dust and emissions

Dust sources during construction will be variable in nature, and impacts will differ according to proximity to sensitive receptors such as dwellings and schools. For example, ground clearance activities and earthworks have the potential to generate dust for limited periods, whilst dust which could emanate from bridge works or laydowns areas could affect people for longer periods.

The results of air quality risk assessment for the proposal (refer Appendix L: Air quality) indicate that the unmitigated air emissions during the construction phase pose a low risk of human health impacts, but a medium risk of dust soiling for some nearby properties, requiring that suitable management measures to control dust must be implemented during construction.

Air quality assessment for the proposal's operation concluded that forecast concentrations of modelled air pollutants are predicted to be lower than the adopted air quality goals at all identified sensitive receptor locations, except for the annual criterion for PM<sub>2.5</sub> (i.e. fine particles). However, Appendix L: Air quality notes that due to the elevated background monitoring data utilised, it is expected that actual concentrations of PM<sub>2.5</sub> will be compliant at all sensitive receptor locations. Potential effects of changes to air quality regarding health are further considered in Section 7.7.4.

ARTC's construction contractor will consult with property owners adjacent to the study area and in Toomelah and North Star to identify sensitivities such as the location of water tanks and any concerns held by people who have asthma or chronic respiratory illnesses in relation to dust, for consideration in the development of dust and emission controls.

A Construction and Environment Management Plan (CEMP) will be developed to address potential dust sources during the detailed phase of construction planning. A list of recommended construction mitigation measures to be considered when working near sensitive receptors has been provided as part of Appendix L: Air quality for incorporation into the CEMP.

## Bridge construction and operation

The proposal includes a total of 11 bridges, including crossings of:

- Mobbindry Creek, Mobbindry Floodplain and Back Creek
- Forest Creek, in two locations
- Melonenkamm Creek
- Bruxner Way
- Whalan Creek Floodplain in three locations
- Whalan Creek, Tucka Tucka Road and the Macintyre River, via the Macintyre River Viaduct.

Bridge construction will require establishment of laydown areas on either side of the bridge, piling, delivery of concrete, steel and other supplies, construction of foundations and the bridge deck, and roadworks to link the bridge to the road network. This is likely to cause significant noise and disruption to amenity in areas near bridge construction sites, however only one sensitive receptor appears to be located near proposed bridge works. This is a residential dwelling at Ch 6.2 km approximately 400 m from the Mobbindry Floodplain bridge construction site. Consultation and development of property-specific mitigation will be required for this property if the dwelling remains occupied.

The construction of the Macintyre River viaduct has been raised as a concern by Toomelah residents, who fear that construction activities and the bridge's operation will impact on the quality of the environment and their connections to that environment. This is further discussed in Section 7.3.2.

The operation of the Macintyre River Viaduct is also of concern to residents living near the Macintyre River, including Toomelah residents, who fear that it will interfere with flooding patterns and exacerbate flooding risks. The potential for proposal impacts on hydrology is addressed in EIS Chapter 13: Surface water and hydrology and water quality. The potential for changes to flooding patterns is further discussed in Section 7.2.5.

### **Quarry and borrow pit operation**

The operation of quarries (extraction of rock) and borrow pits (extraction of soil, gravel or sand) has the potential to impact on the amenity of nearby neighbours through creating noise, dust or increases in the number of heavy vehicles using local roads.

The closest operating quarries to the study area are near Inglewood, approximately 75 km northeast of the study area), Moree (approximately 80 km southwest of the study area) and Pallamallawa (approximately 60 km to the south of the study area). GSC advised in consultation that they had recently approved applications for quarry developments in the LGA, in anticipation that the applicants could supply Inland Rail (which could include the N2NS and NS2B projects). Detailed information regarding quarry and borrow pit operation is provided in EIS Chapter 7: Construction of the proposal.

Agreements between the construction contractor and the owners of quarries and properties on which borrow pits would be located will include consideration of the amenity of nearby neighbours (in relation to noise and dust) and management measures to ensure trucks travelling between the study area and quarries or borrow pits avoid impacts on traffic safety and/or dust levels for nearby homes and farms.

### **Local character**

During construction, laydown areas and the construction accommodation camp may impact on the visual character of North Star, near creek and river crossings, and in the area near the Macintyre River Viaduct. This would be a temporary impact, and these areas would be rehabilitated to a similar state following construction.

With respect to operation, local residents in Toomelah have identified a strong connection to the surrounding landscape, with the Macintyre River being of particular scenic and environmental value to Toomelah residents and property owners living on the south side of the river. The proposed Macintyre River bridge will be approximately 10 m higher than the bank of the Macintyre River and approximately 20 m higher than the bed of the Macintyre River. There is a consensus of concern that railway infrastructure including viaducts, bridges and double stacked train carriages will have a negative impact on the scenic qualities of the river and its banks. Toomelah residents also noted that the noise of trains passing will affect the serenity in this area of the river which is used for fishing and family recreation.

With respect to the Macintyre River crossing, visual assessment for the proposal (refer EIS Chapter 21: Landscape character and amenity) found that the new viaduct and railway infrastructure will result in localised removal of vegetation and the intrusion of built infrastructure within what is currently a relatively undeveloped landscape. There are no formal landscape designations in this area, however the overall landscape sensitivity was, at greatest, 'moderate' which recognises the relatively high quality of the landscape and its value for the local Aboriginal community. The river crossing location will be visible from Tucka Tucka Road, primarily impacting residents of Toomelah, however the overall magnitude of change to the 'Landscape Character Type' was predicted to be low.



In relation to operations, due to proposed earthworks, and the provision of new rail infrastructure and the rail bridge, the proposal was assessed as representing a visual impact of high significance on views near Toomelah, whilst the movement of double stacked freight trains was assessed as a moderate visual impact. On this basis, the proposal's operation is expected to have a negative impact on visual amenity in this area, and on local Aboriginal people's enjoyment of its natural character.

Stakeholders are also concerned about the effect of the rail corridor embankment and fencing on rural character. The existing non-operational rail line is part of rural character, however a redeveloped corridor, and its use by double stacked container freight trains, would be less congruent with the agricultural landscape and may be experienced as a detraction from the landscape's scenic values. Fencing to the rail corridor would be designed to be congruent with the character of rural fencing. Visual impacts on other receptors have been assessed as lower, relating to isolated homesteads during construction and operation (refer EIS Chapter 21: Landscape character and amenity).

In the greenfield section, the rail corridor is likely to be seen by property owners as a significant intrusion on their properties. Some greenfield landowners are concerned that the rail corridor's visual impact will detract from their properties' 'clean and green images' which include a focus on animal health. ARTC will develop effective mitigations to screen and buffer the rail corridor in accordance with the findings of EIS Appendix P: Landscape and visual impact assessment. This is expected to reduce impacts on the visual amenity of properties, however landowners are likely to experience the proposal as an intrusion on the character of the properties affected.

### **7.1.3 Connectivity**

#### **Road rail interfaces**

Within the Gwydir LGA, the study area crosses and aligns with North Star Road and Forest Creek Road. Within the Moree Plains LGA, the study area crosses and aligns with North Star Road, Bruxner Way and Tucka Tucka Road. Where the proposal traverses these roads, there is potential to disrupt or delay traffic.

A rail-over-road bridge crossing of Bruxner Way has been proposed to avoid unacceptable traffic delays on this key connector during the proposal's operation.

A rail-over-road bridge crossing of Tucka Tucka Road is also proposed and will avoid traffic delays and potential road safety issues on Tucka Tucka Road, which connects Toomelah to other communities.

Active (controlled) level crossings are proposed on North Star Road, at Ch 7.0 km and Ch 19.9 km. Passive level crossings are proposed on Forest Creek Road at Ch 12.2 km and on an unnamed road at Ch 9.2 km.

#### **Construction**

Construction of bridges and level crossings on public roads will require detours and cause temporary delays to road users. Assessment of traffic and transport impacts (refer EIS Chapter 20: Traffic and transport) indicates that certain sections of the proposal will also generate construction-related traffic volumes in excess of 10 per cent of the background traffic during the construction phase, therefore the Level of Service (LOS) on the road network will be worse. Where traffic increases would worsen levels of service, there is potential for delays to other vehicles, which may be felt particularly during harvest seasons when there are more agricultural transport trucks using the roads.



EIS Chapter 20: Traffic and transport describes traffic management measures that will be employed to manage the short-term traffic impacts expected during construction, for example:

- Construction traffic management plan to be implemented and reviewed periodically for effectiveness by stakeholders
- Ongoing consultation with relevant Councils, police, emergency services and affected property owners/occupiers to inform of proposal status and likely traffic disruptions and temporary road closures
- Relevant emergency services should be notified in advance prior to the movement of all hazardous/dangerous or oversize construction material and equipment
- Secondary alternative construction route activities should be determined as part of the traffic management plans, in the event of the primary route is blocked off by an emergency/accident

More information on haul routes and proposed traffic management measures can be found in EIS Chapter 20: Traffic and transport.

### **Operation**

The proposal would cross approximately 40 private roads, the majority of which will be closed, subject to agreement with affected property owners, with new grade-separated crossings or level crossings to be constructed. This will reduce the number of private road connections across the study area and therefore connectivity within and between properties, however the proposal also provides the opportunity to upgrade and replace existing level crossings. During detailed design, crossing design will consider the specific needs of property owners for e.g. stock and equipment movements.

Further detail about proposed treatments for road rail interfaces is provided in EIS Chapter 20: Traffic and transport during the detailed design phase will involve:

- Consulting with stakeholders regarding the preferred treatment options
- Reviewing the proposed works for each crossing in detail, considering input from stakeholders
- Preparing the detailed design for level crossing works
- Stakeholder consultation
- Finalising the detailed designs for each crossing, considering the results of consultation.

Delays at level crossings will occur during operations. Trains using the railway line will initially be 1.8 km long. Train speeds at each level crossing location will differ, depending on the surrounding environment. The estimated total maximum wait time for a vehicle at an active level crossing (including the time required for boom gate operation) is estimated at approximately two minutes for a 1.8 km train (refer EIS Appendix M: Traffic impact assessment for more detail). Trains of 3.6 km in length may operate in the Inland Rail corridor from 2040, which could result in longer traffic delays. This may cause frustration and inconvenience for affected road users and will potentially disrupt the operations of farms and agribusinesses due to the potential delay in the transportation of water, feed and stock to and from properties. However, EIS Appendix M indicates the level of service on affected roads would remain unchanged.

In assessing the proposal's impacts on the road network's Levels of Service during operation, EIS Appendix M: Traffic impact assessment concluded that, in relation to level crossings, acceptable Levels of Service would be maintained with minimal impact to vehicle queueing and delays. Appendix M: Traffic impact assessment also notes that the proposal is likely to increase vehicle exposure at rail crossings, which will be mitigated by ensuring safe design standards are implemented to minimise and mitigate the significance and likelihood of crashes which may occur at level crossings.

The potential to affect emergency services' response times due to construction works or delays at level crossings was a concern for local residents and is discussed in Section 7.6.2.

### **Toomelah**

As noted by community leaders in SIA consultation, Toomelah and Boggabilla people have grown up knowing the existing non-operational rail corridor as part of their 'back yard', and parts of the study area have cultural significance. The construction process will change the nature of the study area near Toomelah, limiting local use of the corridor and introducing a rail bridge over Tucka Tucka Road.

Toomelah is isolated from other communities, with Boggabilla the nearest town at approximately 10 km to the west, and Goondiwindi the nearest regional centre at approximately 30 km northwest by road. Vehicle ownership rates are low in Toomelah, so residents are largely dependent on walking and shared vehicles.

The Macintyre River Viaduct will span 1.8 km of the rail alignment parallel to the Toomelah community, at a distance of approximately 2 km to the community. Whilst the viaduct will generally only be visible on the drive between Toomelah and Boggabilla and from the Macintyre River and its banks, this has the potential to act as a visual barrier which may make the Toomelah community feel more isolated than they are at present, in the context of their current physical and social isolation. The new rail corridor would also constrain movements between Toomelah and the river where the Macintyre River Viaduct is constructed. The loss of access to the area required for the bridge could be offset by working with the Toomelah community to enhance the environmental management and amenity of other areas along the river.

There may be potential to treat the spans near Tucka Tucka Road as an entrance statement to Toomelah, with gardens, signage, a path, and/or through community art programs. There is also potential, in consultation with the Toomelah community, to name the bridge to recognise a local Indigenous leader or site.

The proposal's construction and operation will be a significant change for the community of Toomelah, particularly in the context of a lack of familiarity with major construction and freight rail lines and will need careful and consistent communication with Toomelah residents to ensure their concerns and any practical difficulties caused by changes to their local environment are addressed.

### **Stock movements**

Travelling Stock Reserves (TSRs) are parcels of Crown land under the *Crown Land Management Act 2016* for use by travelling stock. TSRs were originally set aside to move livestock from farms to markets or railheads, however those with connectivity to other TSRs may have other values including biodiversity or scenic values.

As detailed in EIS Chapter 20: Traffic and transport, there are four TSRs near the study area. One (at Ch 9.3 km) is an isolated fragment (not connected to any linear TSRs that could be used for transporting stock overland) where access is already restricted by the existing rail corridor and North Star Road. A second larger isolated parcel located between Ch 19.9 km and Ch 20.8 km near Oakhurst Road would be severed, which would be mitigated by provision of a stock underpass associated with the Unnamed Creek 2 Rail bridge at Ch 20.7 km. A third TSR at Ch 29.7 km to Ch 30.1 km would be severed, affecting its use by the adjacent landowner, which would be mitigated by a stock underpass provided with the Tucka Tucka Road Rail bridge at Ch 30.1 km. The proposal would run adjacent to a fourth TSR located between Tucka Tucka Road and the Macintyre River, however there would be no direct impact on this TSR.

There may also be informal TSRs which may be used to transfer stock to various grazing paddocks and holding yards within or across the study area. Consultation is ongoing with landholders to identify impacts, if any, to informal TSRs.

#### **7.1.4 Access to natural resources**

##### **Remnant forest**

Consultation with Toomelah community representatives indicated that residents access remnant forest areas along the existing non-operational rail alignment due to it being one of the few corridors that still contain native vegetation with edible and/or medicinal properties, and for cultural education of young people. Remnant forest within the study area is likely to be significantly and permanently disrupted. A community leader has indicated that opportunities exist to re-establish some of the species at Toomelah, creating an alternative bush tucker area as a potential offset for this impact.

ARTC will support Toomelah community initiatives to mitigate loss of access to native vegetation in the existing non-operational rail corridor, such as re-establishment of species affected. This will be addressed as part of a package of mitigation strategies to be developed with the Toomelah community.

##### **Water access**

Landowners have expressed significant concerns that the rail corridor will disrupt access to water, noting that access to water sources is of importance during periods of extended drought. This includes licenced access to water sources, and impacts on established water management systems, such as relocation of water pipelines or impacts on water storage areas. ARTC is working with landowners to mitigate impacts on their water management infrastructure, which may include re-alignment of water pipelines or dams, or replacement of bores.

The potential to affect landowners' groundwater access is discussed in Appendix N: Groundwater which concluded that during construction:

- There is potential for earthworks, cuttings and bridge piling works to impact groundwater elevations in shallow alluvial aquifers, which may require dewatering during construction, however potential impacts on groundwater flow in the shallow alluvial aquifers are expected to be minimal
- No impacts to the accessibility of groundwater for stock watering, irrigation and farm use are anticipated during construction, however potential impacts may arise due to cuttings which intersect shallow aquifers, resulting in a net loss in groundwater supply for one property owner.

ARTC is consulting with the potentially affected property owner to identify strategies which will mitigate or offset any loss of groundwater supply. ARTC is also continuing to consult with the owners of other properties in and near the proposed disturbance footprint to explain the results of relevant EIS assessments and discuss outstanding concerns about surface water and groundwater supply. The results of this consultation will be considered in the proposal's detailed design stage, and in the CEMP.

During operation, the assessment presented in Appendix N: Groundwater found that there is a potential for increased groundwater levels due to surface loading of alluvial soils from embankments and other construction activities if groundwater is shallow. This was noted as relevant to localised portions of the low-lying Macintyre River floodplain and is not expected to result in any negative impacts on landowner access to groundwater.

As described in EIS Chapter 7: Construction of the proposal, the construction phase will require water for soil conditioning, dust suppression and maintenance of laydown areas and haul roads (requiring non-potable water) and for the construction workforce accommodation camp (requiring potable water).

Boggabilla Weir is located on the Macintyre River, approximately 9 km upstream of Goondiwindi and has been identified as a potential source of non-potable water for construction. Prior to sourcing any construction water from Boggabilla Weir, the necessary approvals and licences would be obtained from WaterNSW. A landowner in the proposal's greenfield section has registered their interest in selling water to the proposal for the life of the construction period, which will be the subject of consultation with the landowner during the detailed design phase.

Potable water for the construction camp will be sourced from North Star. To minimise the amount of water to be sourced from North Star construction workforce accommodation camp, the camp is also likely to include rainwater harvesting and greywater recycling systems.

Potential sources of water for construction will be investigated further during the detailed design phase. If Boggabilla Weir and/or North Star are unable to supply the required quantity of water within the required timeframe, other sources of water near the proposed alignment will be investigated.

## **7.2 Personal and property rights**

This section describes the potential for impacts on private properties and landowners.

### **7.2.1 Property acquisition**

The proposal was designed to utilise the existing non-operational (brownfield) rail corridor where possible, to minimise the extent of 'new' properties to be acquired. The alignment has also been designed where possible to follow cadastral boundaries, minimising property severance.

The proposed permanent disturbance footprint will directly impact upon approximately 274 ha of land, traversing 49 private properties, and existing rail and road corridors. Full acquisitions of properties are not anticipated, so property owners would not be displaced. Of the 49 properties that may require partial acquisition, 37 are located adjacent to the existing rail corridor, and the remaining 12 are located within the greenfield segment of the proposal.

Properties required for the greenfield section of the permanent disturbance footprint comprise nine parcels of freehold tenure, two parcels of Crown land and one parcel with unknown tenure. Properties along the existing non-operational rail corridor include 33 parcels of freehold tenure, as well as three parcels of Crown land and one parcel of NSW Government tenure).

Landowners within the greenfield section who do not agree with the proposal's location are aggrieved about the imposition on their properties. ARTC has been working with all directly affected landowners to refine the proposal's design in order to reduce severance impacts, and will mitigate or compensate impacts on farm infrastructure, connectivity or farm management in accordance with ARTC agreements with landowners.

Property acquisitions to enable the proposal to be built on private land will be undertaken in accordance with the requirements of the *Land Acquisition (Just Terms) Compensation Act, 1991*. Acquisition would be undertaken in consultation with private landowners. Acquisition of Crown land would be undertaken in consultation with the State and in accordance with the requirements of the *Crown Land Management Act 2016*. ARTC will be undertaking the acquisition of land together with the NSW State Government prior to construction. The extent of property impacts would be determined during detailed design in consultation with property owners. Additional land required for construction uses would be leased from landowners.

Acquisition of homes to accommodate the proposal is not required. If standard architectural treatments to mitigate operational noise exceedances are not effective for the two or three homes affected, ARTC will investigate options for the relocation of the homes within their current land parcels, in consultation with the affected landowners. If relocation of the homes is required, this would be a temporary disruption to the households, however their links to the properties would be preserved.

#### **7.2.2 Native title**

The Gomeri People have a registered native title claim which includes the proposal area, however the claim is yet to be determined by the courts. The proposal intersects seven land parcels which may be subject to Native Title rights, including parcels held as NSW Government tenure, unknown tenure type or Crown land. Native title rights may be affected by the proposal's use of this land.

The current position of ARTC/Inland Rail is that compulsory acquisition will be used to obtain the Native Title rights and interests within the study area. Currently, it is not intended to negotiate Indigenous Land Use Agreements to obtain Native Title rights and interests.

#### **7.2.3 Disruption to farming uses**

Consultation with directly affected landowners has occurred throughout the development of the draft EIS to understand how affected properties and their infrastructure are used, and the potential for fragmentation of properties. This informed refinement of the Proposal's design, including amendment of the Proposal's alignment to avoid irrigated cropping land, and alignment along cadastral boundaries to minimise severance impacts on cropping and grazing properties.

The potential for cattle movements to be affected and cattle yards to be stranded was identified through consultation with one landowner. ARTC has met with the affected landowner to discuss private stock crossings of the rail alignment. The Proposal's design includes proposed stock underpasses under the bridges, with ongoing consultation with landowners to occur.

The Proposal's design does not inhibit existing activities on either side of the alignment, which has been achieved through the provision of raised bridge structures to ensure connectivity between parcels of land on either side of the alignment, including cattle access points. This has also addressed the potential for cattle yards to be stranded. Fences would be removed, affecting cell grazing, which will be addressed as part of the compensation agreements with the affected landowners.

Consultation with landowners also identified the potential to affect machinery movements between land parcels and properties, enabling the Proposal design team to develop an understanding of the widths of crossings that would be required to move large machinery across the rail corridor. From a feasibility perspective, it has been established that movements of large machinery and equipment across the rail corridor can be achieved. During the detailed design phase, the design treatments for crossings will be developed in consultation with affected landowners.

Landowners also identified the potential for water pipelines under the rail corridor to be removed or made inaccessible, affecting their access to water allocations. The affected landowners are mapping the water pipelines and will provide this information to ARTC in order to identify specific impacts and support the development of mitigations such as make good arrangements for disruption to water access.

Landowners raised the issue of scouring under bridges, which has been considered in the structural design of bridge elements, with scouring of waterways of more concern where culverts are used. Scour protection has been designed to ensure that that boundary velocities do not exceed permissible soil scour velocities, which will be further considered and refined in detailed design.

Within the brownfield section, loss of connectivity though a reduction in rail crossings may also affect the management of properties. ARTC has consulted with landowners in developing the design for level crossings to reduce impacts on cross-corridor connectivity. Landowners noted that fencing the rail line to protect stock safety will prevent farmers from using the high country in the corridor as a safe area for vehicles, stock and people during floods.

The precise extent of impacts on properties would be determined during detailed design, in consultation with affected landowners. Mitigations for impacts on existing property infrastructure will be captured within property-specific agreements for directly affected properties, to be developed during the detailed design in consultation with landowners.

As noted in Section 7.2.1, ARTC will be undertaking the acquisition of land together with the NSW State Government prior to construction, and compensation for overall impacts on properties will be determined during the acquisition process in line with the Land Acquisition (Just Terms) Compensation Act, 1991. Consultation with the affected landowners will be ongoing throughout the Proposal's life to minimise operational impacts as much as reasonably practical

On this basis, the Proposal's acquisition of land is likely to disrupt property accesses, access roads and cross-property movements, however directly affected properties' ongoing use for their current purposes would be preserved, except for one small parcel owned by the NSW Government.

Ongoing consultation with all directly affected landowners will be conducted as the Proposal's detailed design progresses, to develop property-specific mitigations and/or compensation arrangements that address direct impacts on farming uses as the design matures.

#### **7.2.4 Property values and plans**

Property owners near the study area are concerned that property values could be affected by visual, noise or severance impacts, diminishment of carrying capacity or productivity, disruption to water supplies, or perceived or actual increases in flooding risk. This was a source of considerable anxiety about their future financial security.



Research on the relationship between property values and infrastructure indicates that property prices are determined by a combination of the properties' actual utility (i.e. use and amenity) and buyers' perceptions about the environmental impacts of infrastructure (Elliott, 2008), with responses to perceptions of risk varying. ARTC is developing property-specific agreements with directly affected property owners about mitigation of farm productivity or management.

Research on the effects of freight rail lines' amenity impacts on property values in Australia was not identified.

Property values may be affected by a mix of factors related to the proposal, including direct impacts on land and infrastructure (which will be addressed through commercial agreements between ARTC and property owners) or views about environmental changes such as increased noise or dust. Values may also be affected by factors which are unrelated to the proposal, such as the availability of rural and residential properties, or the effects of other projects (such as highway re-alignments).

Property owners' concerns about the proposal's potential to change property values are acknowledged, however assessment of the likelihood and magnitude of change is not possible given the individual circumstances of properties, pending commercial agreements between ARTC and affected property owners, and the multiple factors at play.

ARTC has committed to a comprehensive range of environmental and social impact management strategies which will reduce the potential for impacts on amenity, use or environmental qualities of properties near the rail corridor. ARTC will also communicate its commitments to environmental management, and EIS approval conditions, to local and regional community members, to reduce the likelihood of negative perceptions about the amenity of properties in or near the study area.

### **7.2.5 Flooding**

The proposal's potential to change overland water flows or flooding patterns was an area of high concern for local stakeholders. Issues raised by GRC, landowners and the Toomelah Boggabilla LALC include:

- Concern that the proposal will interfere with natural flooding patterns which are intrinsic part of Indigenous culture
- The risk of afflux and diversion of floodwaters in the Whalan Creek floodplain
- Concern that the proposal would increase the risk, duration or level of flooding in Goondiwindi
- Concern for the potential for increased flooding upstream and downstream of the rail corridor
- Concern for increased afflux along the section between Whalan Crossing and the Macintyre River, giving rise to concerns for flooding into Toomelah village, and for the impediment of flows north from Whalan Creek.

The Border Rivers Valley Floodplain Management Plan (NSW Government, 2018) identifies potential socio-economic impacts of changes to flooding behaviour as including:

- Positive impacts on socio-economic factors in relation to flood behaviour and flood risk e.g. flood protection of crops and property, on-farm access, and infrastructure for managing irrigation or stock and domestic water
- Negative impacts on socio-economic factors in relation to flood behaviour, flood risk and flood connectivity including redistribution of flood flows and altered flood behaviour which may result in re-direction of flood flows onto adjacent properties, an increase in flood velocity leading to increased erosion and scour, or increase in flood levels leading to disruptions to daily life or loss of crops and infrastructure.



ARTC has undertaken comprehensive engagement with landowners throughout the development of the flood model and its application for the EIS.

Individual meetings have been held with several landowners and Toomelah Boggabilla LALC to discuss the impacts on the flooding regime associated with the proposed rail line, including review of existing 1 % AEP flood depths, predicted 1 % AEP changes in peak water levels, identification of potential impacts on houses and other infrastructure, and discussion regarding potential mitigation options including raising floor levels, bunding/levee banks and/or acquisition.

Assessment of the proposal's potential to impact on existing flooding patterns is detailed in EIS Appendix H which indicates that there are no impacts greater than 10 millimetres (mm) predicted on habitable dwellings, including in Toomelah, and increases in peak water levels at identified non-habitable structures are predicted to be less than 50 mm under the 1 % AEP event. The assessment found that the proposal would not result in an increase in the times that Tucka Tucka Road and Bruxner Way are non-trafficable in a 1 % AEP event (a flood event with a one per cent probability of occurring in any given year). Overall, no significant changes to peak flood flow distributions were predicted as a result of the proposal. There are two or three properties where significant impacts could occur under extreme flooding events, which will be further considered as part of the detailed design, in cooperation with the affected landowners, to identify appropriate mitigations.

As noted in 7.2.3, the potential for scouring to occur in relation to culverts and bridges has been considered in the structural design of design elements, with scour protection designed to ensure that that boundary velocities do not exceed permissible soil scour velocities, which will be further considered and refined in detailed design

On the basis that changes to the existing flooding conditions are predicted to be minor, a significant impact on socio-economic conditions as the result of changes to flooding behaviour is not anticipated. Notwithstanding, stakeholders are likely to remain concerned about flooding. This will require ongoing communication with concerned stakeholders (primarily the Toomelah community, GRC and affected landowners) to demonstrate how the proposal's design and construction methodology will address impacts on existing flooding conditions.

## **7.3 Community and culture**

This section describes potential changes to local populations, community identity, community cohesion and recreational access.

### **7.3.1 Population change**

Acquisition of properties as a result of the proposal is unlikely to displace any households, so there would be no population change in this regard.

Proposal construction would require a workforce of up to 350 personnel. Whilst some personnel may live near the study area (e.g. in North Star, Boggabilla, Toomelah or Goondiwindi) the majority are likely to live elsewhere and stay in the proposal region while they are rostered on. A construction camp will be established with sufficient capacity to accommodate the total construction workforce.

The establishment of a construction camp at North Star (refer Section 7.5.1) could see a temporary population influx of up to 350 people. North Star village has a current population of approximately 50 people and a population of approximately 230 people in the larger North Star State Suburb. The proposal-related population influx would be a significant change for the North Star community, swelling the village's population to approximately 400 people at the peak of construction. This may have consequences for community character and identity as discussed below, and for feelings of community safety and demand on local services, as discussed in Section 7.5.1.

Management of potential issues e.g. poor traffic behaviour, or behaviour which is inconsistent with rural values (such as respect for locals and the family friendly environment) will be required. This will include clear expectations on behaviour in and around town and compliance with workforce conduct policies.

No changes to the population of other nearby communities is expected, beyond the potential for retention of some residents who may otherwise leave for work in other regions.

Operational personnel are likely to include a mix of local personnel, mobile crews moving between sections of Inland Rail and personnel based in operations centres, as further discussed in Section 7.4.1. Operational personnel from outside the proposal region would return to their home communities after their shift, so no population influx is expected as a result of the proposal's operational workforce.

Decommissioning is not expected to have any effect on populations with the proposal region.

### **7.3.2 Community identity**

Identified impacts on community identity are discussed below.

#### **Cultural values**

Aboriginal people have a relationship to land and their identity is strongly connected to natural elements of place. Consultation with Toomelah community members indicated concern regarding impacts on culturally significant locations including scar trees, and generally on the landscape around Toomelah, which is culturally significant to community members.

Gomeri people as Traditional Owners are connected to the proposal region.

Assessment of potential impacts on Aboriginal cultural heritage was ongoing when the SIA was completed. Preliminary results indicated the potential for:

- Indirect impacts (such as the impacts of vibration or dust) on two scarred trees located immediately outside the rail corridor
- Direct impacts on isolated artefacts and artefact scatters within the construction footprint.

A Toomelah community leader has also advised concern about the community's ability to adapt to the nature of change that the proposal represents. It is likely that proposal-related disturbances to the landscape around Toomelah will add to the stresses that the Toomelah community has already experienced in maintaining its cultural identity, and there is potential for this to affect both current and future generations.

Appendix E: Aboriginal heritage provides a detailed assessment of potential impacts on Aboriginal cultural heritage and recommends management strategies for impacts on Aboriginal cultural heritage, including the development of an Aboriginal Cultural Heritage Management Plan (CHMP) to be prepared in consultation with Registered Aboriginal Parties.

The proposal's potential to affect places of non-Indigenous cultural heritage value is assessed in EIS Appendix F: Historical heritage, which indicates that the proposal would directly affect two rail sidings and two fettlers camps which were identified as heritage places, and there was potential for indirect impacts such as vibration to speed dilapidation of two shearers' sheds, however the significance of the impacts was assessed as slight to moderate.

On this basis, effects on non-Indigenous cultural heritage appear likely to have minimal impacts on community identity.

### **Macintyre River and riparian areas**

The Macintyre River has cultural and social significance as a place for family and community events and activities for Aboriginal and non-Aboriginal people.

The proposal crosses the river between Ch 30.4 km and Ch 30.8 km, and would require removal of vegetation, earth works and construction of a large and imposing structure across the river. Construction of the bridge would alter the natural character of the river and its banks and disturb social, cultural and recreational practices that take place in this part of the river. Assessment of the proposal's impacts on landscapes and visual amenity (refer EIS Chapter 21: Landscape character and amenity) identified a visual impact of high significance during operation relating to the presence of the railway bridge crossing the natural landscape of the Macintyre River valley near Toomelah. As the Macintyre River is very important to local people, there is potential for harm to sense of identity and belonging to place as a result of the bridge's construction and operation.

ARTC will work with the Toomelah Boggabilla LALC and the Toomelah community to develop strategies to offset impacts on the landscape and its amenity near the Viaduct.

### **North Star**

North Star is likely to be the location of the construction accommodation camp (on North Star Sporting Club land on the village's eastern boundary), a large laydown area at the northern entrance to town, a second large laydown area to the town's south, and a third laydown area near the Graincorp facility on North Star Road. Accompanied by an increase in traffic including oversized loads and a temporary population influx, the proposal's construction period is likely to change the town's rural character and residents' sense of place. This would be temporary but with potential cumulative impacts from Narrabri to North Star project, these impacts could affect North Star's identity as a quiet and close community during construction.

ARTC will consult the North Star community about initiatives to offset this change in character during the construction period and will ensure residents' views about the future use and appearance of sites used by the proposal are identified and considered in rehabilitating these sites. In particular, the potential for proposal facilities or infrastructure to remain in North Star to create a positive legacy will be explored with the North Star community.

### **Rural identity**

As noted in Section 5.4.4, local communities' identity is strongly related to their location near the border rivers, agricultural land use, the landscape, and pride in the region's productivity and economic contribution. Changes in the use of land within the study area (from farming or grazing to transport infrastructure) may affect the immediate landscape's contribution to this identity, however the rail line has existed between North Star and Boggabilla for decades, and broader changes in landscape values which would affect rural identity are not expected.

In the greenfield part of the proposal, landowners are concerned that severance of their properties by the rail corridor would affect their productivity, however the properties' key functions are expected to remain intact, so an effect on these properties' contributions to the local rural identity is not expected.

ARTC will also ensure that residents' views about the future use and appearance of construction sites used by the proposal are identified and considered in rehabilitating these sites.

### **7.3.3 Community cohesion**

Community cohesion refers to a community's connectedness, including social networks and capacity for mutual help. Small communities such as those near the study area rely on cohesion to generate contributions to social resources (from community events management to shared farming equipment) to sustain community wellbeing. Proposal-related effects which may affect community cohesion in the study area or nearby communities include:

- Physical severance between properties which has the potential to affect cooperative relationships between neighbouring property owners
- Disruption to movements across the rail corridor, which could affect willingness to travel to social activities
- Potential for community conflict regarding the proposal (e.g. differences of opinion about the proposal or regarding flooding impacts), with effects on community harmony.

Severance between properties and changes to connectivity across the rail corridor are inevitable as a result of the proposal. ARTC will work with property owners to ensure that a satisfactory level of access between adjoining properties is maintained, and to identify action which will minimise or offset changes to connectivity.

Use of the North Star Sporting Club's grounds by the construction accommodation camp may affect its use for regular community and sporting events there, which may temporarily affect community cohesion, but this is not expected to have long term effects and may be offset by enhanced facilities at the Sporting Ground following construction.

Outside of work hours, construction personnel may use public spaces and the Sporting Club facilities for recreational purposes, however other needs such as meals would be catered for by the camp, so interactions between personnel and residents would otherwise be limited. A Code of Conduct containing requirements for positive behaviours and respect for local residents and businesses will apply to all contractor and proposal personnel.

ARTC's investments in local communities will focus on programs and services which strengthen local social networks and provide opportunities for people to meet and participate in community activities. ARTC will also ensure the provision of regular, accessible information about the proposal to community members to support their ability to cope with changes to community cohesion.

### **7.3.4 Recreation**

Local fishing clubs restock Macintyre River and fishing is allowed in the river. Social uses including family events and fishing may be disrupted in this area and in creeks affected by bridge works during construction and in the area where the bridges would be located over waterways during operation. This was of concern to Toomelah residents, who also noted that train and rail noise is likely to affect the character of this part of the river (refer Section 7.3.2).

During construction, the accommodation camp would require use of part of the North Star Sporting Club land site that is intermittently used for local polo matches, pony club and trailbike events. These uses would be interrupted during the construction period as is further discussed in Section 7.5.1.

The proposal is not likely to impact upon recreational facilities in or near towns, formalised recreational trails or dedicated nature reserves.

## **7.4 Employment and Businesses**

This section describes the proposal's potential benefits in relation to employment opportunities and outlines the potential for proposal impacts on other businesses or industries.

### **7.4.1 Employment opportunities**

#### **Construction**

As described in Section 4.3.5, a small workforce (in the order of 20 to 50 personnel) would be required for pre-construction activities in late 2020 to early 2021. This would provide employment for land surveyors, ground clearance crews, access track construction crews, cultural heritage surveyors, and contractors developing laydown areas, flashbutt welding facilities and administration facilities.

Construction of the rail corridor is expected to require a workforce of up to 350 personnel between 2021 and 2025

The construction workforce is likely to peak during the second year of construction.

The construction workforce is expected to include earthworks crews, bridge structures teams, capping and track works teams, and engineering and professional personnel. Construction employment opportunities would include:

- Civil construction engineers
- Trackwork laying
- Roadworks
- Bridge construction
- Professional and technical specialists
- Transport drivers (road and rail)
- Machine operators and crane, excavator and bulldozer drivers
- Concreters and pavers
- Earth movers
- Skilled trades including welding, electrical and drainage/plumbing trades.

The opportunity for employment in proposal construction would be a significant benefit in financial terms for both experienced and inexperienced personnel (and for the self-esteem of new entrants to the industry) and is likely to support the wellbeing of their families during this period. The Toomelah-Boggabilla LALC has noted that Toomelah is in a prime position to supply workers to the proposal, and that retention of personnel from Toomelah would be improved by allowing them to return home at night. This will be communicated to the construction contractor and the potential need for transport for Toomelah-based personnel considered. The availability of construction personnel is discussed in Section 7.4.2.

## Operations

Once operational, a workforce of approximately 15 to 20 personnel is expected, to undertake monitoring and maintenance of the track and infrastructure, signalling, environmental monitoring and management of land and infrastructure in the rail corridor. This is likely to include a mix of:

- Local personnel (e.g. for maintenance of access tracks and/or environmental management)
- Mobile crews moving between sections of Inland Rail (e.g. for major track and ballast maintenance) some of whom may be from the proposal region
- Personnel based in operations centres (e.g. managers and signallers).

ARTC is cooperating with DITCRD to develop program-wide training and development programs to equip proposal region residents for construction and operational employment. ARTC will also promote the availability of operational employment opportunities to residents in the proposal region, with a specific focus on encouraging young people and Indigenous people to participate in skills development programs and apply for proposal-related employment.

This will include working with training partners to identify local people including young people and Indigenous people who are interested in proposal employment, and collaboration to develop training programs which will equip local people for employment in the operation of the proposal.

## Decommissioning

A small workforce may be required around 2124 to decommission the rail corridor. The nature of decommissioning work would include track removal, potentially removal and renovation of level crossings and bridges, demolition of supporting infrastructure, and rehabilitation. As such, it is likely that decommissioning personnel could be drawn from communities within the proposal region which would represent a benefit for local residents.

### 7.4.2 Availability of relevant personnel

A proportion of the construction workforce is expected to be drawn from local communities in the Moree Plains, Goondiwindi and Gwydir LGAs.

The number of people employed in directly relevant industry sectors in the proposal region in 2016 is shown in Table 61. Each LGA had a small heavy and civil construction labour force, but larger numbers of people employed in construction services, manufacturing and professional, scientific and technical services which may have applicable skills for the proposal's construction.

Collectively, the heavy and civil construction and construction services sectors employed 526 people within the proposal region, representing a substantial source of labour for the proposal's construction.

Consultation identified that several Toomelah and Boggabilla residents have qualifications which are relevant to the proposal's construction, including people with certificates and/or experience in horticulture, trades, and catering. Similarly, qualified local people are likely to be living in Boggabilla and Goondiwindi, and in communities within the Gwydir and Moree Plains LGAs.

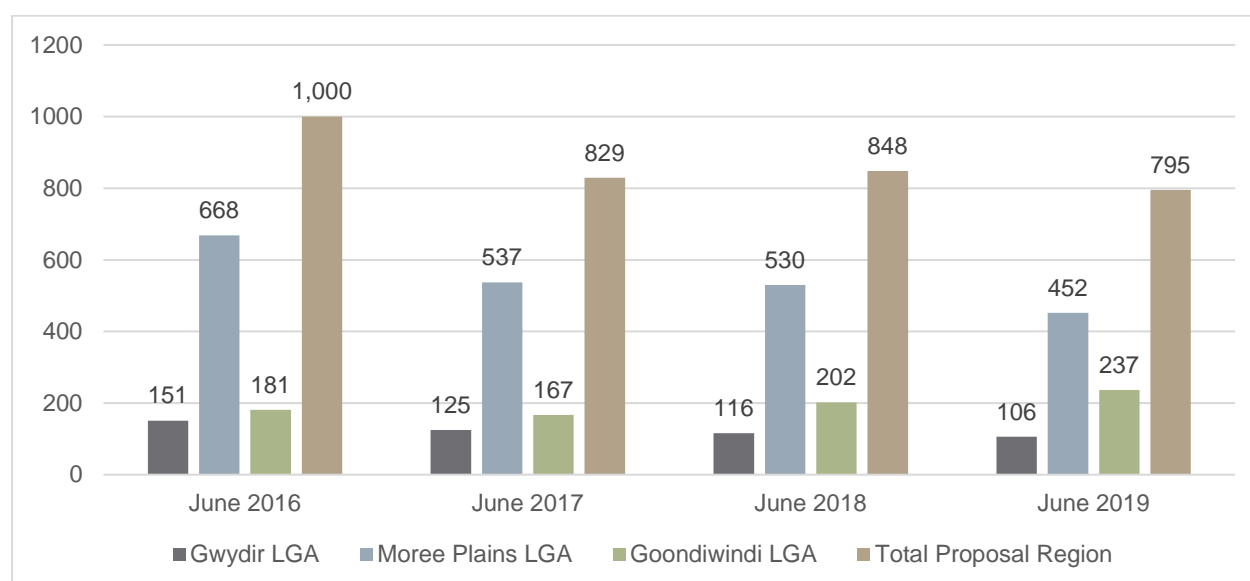
**Table 61**      **Applicable industry sector labour force in the proposal region (2016)**

Industry sector	Moree Plains LGA	Gwydir LGA	Goondiwindi LGA	Total Proposal region
Heavy and civil construction	51	3	57	111
Construction services	197	42	176	415
Manufacturing	152	42	165	354
Professional, Scientific and Technical Services	205	19	160	384
<b>Total sectors</b>	<b>605</b>	<b>108</b>	<b>558</b>	<b>1,265</b>

**Source:** ABS Census – Working Population profiles, 2016.

The number of people from the proposal region who would be available for employment during the construction phase is unknown, particularly as construction workforces are highly mobile. ARTC's experience with the construction of the Inland Rail Parkes to Narromine (P2N) project is that a large proportion of the construction workforce are unskilled labourers from the P2N project region who have been equipped (where necessary) through training and on the job experience to work in project construction.

The number of people in the proposal region who were unemployed decreased from a total of 1,000 people in June 2016 to 795 people in June 2019. In June 2019, the Moree Plains LGA labour force included 452 people who were unemployed, with a further 237 people in the Goondiwindi LGA and 106 people in the Gwydir LGA that were unemployed. Collectively this represents a significant potential labour pool for the proposal's construction.

**Figure 4: Number of unemployed people - LGA and proposal region, June 2016 – June 2019**

**Source:** Australian Government Department of Employment, Skills, Small and Family Business, 2019.

The proposal region has capacity to supply a portion of the construction workforce, from within its experienced heavy and civil construction workforce (approximately 526 people in June 2016) and from the pool of workers who are unemployed (795 people in June 2019). Construction workers would also be drawn from the surrounding region, including the North West New England SA4 and regions in South East Queensland, so employment benefits will extend to construction industry workers across the broader region.



In this context, the movement of up to 350 personnel at peak to proposal employment is a relatively modest requirement and is not expected to significantly affect the local or regional labour market. The proposal may contribute to existing shortages in specific engineering and construction trades (refer Section 5.5.3). Cumulative demands for construction labour are also likely, as discussed in Section 7.9.

The proposal's construction phase represents an important source of potential training and career pathway development for Indigenous people and young people in the proposal region.

ARTC's intention to advertise proposal opportunities locally and engage with construction companies in the proposal region will ensure that the maximum local benefit is derived from proposal employment.

The industrial and consumption effects of the proposal will result in the creation of indirect jobs both due to the stimulation of businesses further up the supply chain (e.g. manufacturers and suppliers of industry inputs), and the stimulation of activities downstream (e.g. through the provision of inputs to other sectors and the expenditure patterns of employees). Modelling results outlined in EIS Appendix I: Economic impact assessment indicate that indirect employment will be generated in the professional, scientific and technical services and wholesale trade sectors, reflecting the importance of these two sectors in the construction sector's supply chain, and that there could be as many as 100 indirect jobs created and filled in the proposal region, as a result of this construction activity, subject to labour market conditions.

The availability of construction personnel is described in Section 5.5.1. In drawing from a large labour pool in the North West New England Region and beyond, the proposal is unlikely to have significant difficulties accessing adequate labour for construction or operation.

ARTC is establishing the Inland Rail Skills Academy which is a collection of projects and partnerships with the aim to:

- Facilitate local employment and procurement opportunities regionally by 'priming the market' in each region in which Rail would be constructed
- Make it easy for Inland Rail contractors to employ and procure trained and competent people locally; and
- Build Inland Rail's social licence to operate for Inland Rail projects.

Further details are provided in Section 8.3.

Training pathways and creation of opportunities for the development of skilled local and Indigenous workers through the proposal's construction and operation will be achieved by working with:

- Schools and local training providers, to provide appropriate training
- Indigenous community networks, to encourage applications and increase the number of Indigenous people applying for jobs
- Key partners, to link training and development programs with other projects and local industries to provide the greatest regional benefit
- NSW and Australian Governments, to provide long term outcomes through training, mentoring and other support programs.

ARTC's Inland Rail Skills Academy and training partnerships will help to ensure that young people and Indigenous people in the proposal region have the opportunity for skills training which will equip them for the construction industry and will be transferrable to future major projects. It will also result in an increase in the skilled labour force in the proposal region.

As many social impacts and opportunities associated with Inland Rail will emanate from construction contractors' activities, procurement processes and construction contracts will contain targets relating to social performance. ARTC will work with its construction contractors and other stakeholders including training providers to ensure the proposal achieves employment of local residents (refer Section 8.3).

### **7.4.3 Effects on businesses**

There appears to be no potential for direct impacts on local businesses in towns due to changes to business access, except for traffic disruptions as described in Section 7.1.3, or for change to town centre businesses' visibility or amenity. Other potential impacts and benefits for local businesses and industry are discussed overleaf.

#### **Agriculture**

Severance of agricultural lots and/or impacts on the connectivity of properties may impact on the productivity of agricultural businesses, with potential to impact on the availability of employment on farms. Farmers and agribusiness owners identified concerns including:

- Potential for flooding to disrupt their operations (assessed in detail in Appendix H: Hydrology and flooding and discussed in Section 7.2.5)
- Effects on harvest movements and stock sales due to impediments to property access or operation (discussed below)
- Concerns regarding biosecurity with respect to migration of weeds and pest species as the result of construction or operation (assessed in detail in Appendix B: Biodiversity technical report and discussed below).

The potential for impacts on farm management is also discussed in Section 7.2.3 and in EIS Chapter 22: Land use and property.

Effects on internal movements within properties and between adjoining land parcels may be affected by property severance or the proposal acting as a barrier to movements between land parcels, which could affect harvest and stock movements during construction. For the operational phase, private level crossings are being designed in cooperation with the affected landowners to minimise these impacts. Property-specific agreements will address each of the issues identified by landowners, for consideration were possible in the proposal's detailed design CEMP.

Roads which are connectors between producers and their markets include North Star Road, Forest Creek Road, Bruxner Way and Tucka Tucka Road. There is potential for road works to cause temporary disruption in access to markets via these roads during construction, however longer-term impacts on travel times are expected to be minimal.

As noted in Appendix B: Biodiversity technical report, without appropriate management strategies, proposal activities such as earthworks, movement and disturbance of soil, and vehicles and machinery movements have the potential to disperse weeds, which may affect public or private land. Unmitigated proposal activities also have the potential to disperse pest animal species into the surrounding landscape. Following application of ARTC's approved mitigation measures and compliance with the relevant regulatory requirements, (refer Appendix B: Biodiversity technical report), residual impacts are expected to be reduced.

There is also potential for agricultural producers to access freight rail services to transport their produce to market. Locations at which freight could be loaded have not yet been determined, but this could be a benefit for local producers.

## **Tourism**

Impacts on the amenity of tourism attractions or scenic values may impact on visitation numbers, and therefore on employment levels.

There is potential for the amenity and character of North Star to change during construction with the accommodation of up to 350 workers in town, however this is expected to be tolerated by tourists due to North Star's excellent location on touring routes, and the temporary nature of the use. Following construction there is potential for some of the accommodation camp's buildings or infrastructure to remain for community benefit, which may increase access to facilities which support tourism in the North Star area.

The proposal would run parallel to the Bruxner Way for approximately 13 km. Bruxner Way is a major east-west link between the Newell Highway (in the northwest near Boggabilla) and the New England highway (in the east at Tenterfield). Tourists encounter many variations of rail-road interfaces and some will find the rail corridor of visual interest, however others may see the proposal as diminishing the rural landscape. This is not expected to have a significant impact on the proposal region's tourism values.

## **Transport and logistics**

There are no transport or logistics businesses located near the study area, however several exist in Goondiwindi and Moree. During construction, there will be significant opportunities for transport businesses to bring construction materials to laydown areas and remove waste materials and recyclables from construction compounds.

During operations, there may be a decrease in long haul road freight volumes over time, affecting levels of trade for local transport businesses involved in this sector. The proposal may also facilitate third party commercial ventures such as freight and logistics hubs which would increase the opportunity for shorter haul road transport, potentially offsetting the loss of business in long haul transport.

## **Economic development**

The Inland Rail Business Case (ARTC, 2015) identified several benefits which will support regional economic development, including:

- Improved linkages and reduced distances travelled within the national freight network
- Improved access to and from regional markets
- Reduced rail costs, improved reliability and greater certainty for freight travelling between Melbourne and Brisbane.

More generalised benefits would include the increased capacity of the rail network, releasing capacity for passenger services in Sydney and Brisbane, and the removal of truck movements from Australian roads, resulting in improved road safety, reduced truck volumes in regional towns, and a reduction in carbon production.

The business case notes that Inland Rail will be a catalyst for complementary supply chain investments, including fleet upgrades, new metropolitan and regional terminals and integrated freight precincts, as well as the potential for creation of new and expanded regional industries, including rail based warehousing and associated freight precincts.

ARTC will consult with local and regional businesses in the proposal region to ensure they have access to current information about Inland Rail and promote Government services and programs which are available to businesses considering investment in projects related to Inland Rail.

## **Graincorp – North Star facility**

The proposal would locate a laydown area adjacent to the North Star GrainCorp facility's northern boundary. Consultation with Graincorp as part of the Narrabri to North Star project identified that Narrabri to North Star project's construction works would interrupt GrainCorp's use of their siding to the rail line for grain transport. ARTC is working with GrainCorp to identify site requirements such as improved fencing and to develop a design solution which improves GrainCorp's rail loading facilities for the future.

### **7.4.4 Supply opportunities**

ARTC's research to date has identified more than 150 businesses with relevant skills sets and service offerings within 125 km of the proposal and is developing a register of local and Indigenous businesses to be engaged in consultation about proposal opportunities.

The proposal will require a range of construction supplies, including borrow and ballast material, pre-cast concrete sleepers and turnout panels, steel, fencing, electrical components, fuel and consumables. It is likely that borrow and ballast materials may be accessed from within the proposal region. Some pre-cast concrete components may come from Toowoomba or Ipswich which have the closest commercial operations. Other major components are likely to come from outside the region.

Opportunities for local and regional businesses to supply to the construction phase are likely to include fuels, equipment replacement and borrow and quarried material. As noted in Section 7.1.2, the closest operating quarries are near Inglewood, Moree and Pallamallawa with additional quarries recently approved in the Gwydir LGA. These quarries are a likely source of ballast material for proposal construction and quarry owners are likely to derive substantial benefits from proposal supply opportunities.

Services which could potentially be sourced from within local or regional communities include:

- Fencing
- Electrical installation (excluding rail systems) and instrumentation
- Rehabilitation and landscaping
- Cleaning and maintenance of construction and accommodation facilities
- Traffic management and security services
- Trades services, possibly supplied by major construction contractors, potentially working out of Goondiwindi, Moree or Toowoomba
- Professional services (e.g. human resources management)
- Community adaptation to the rail corridor (e.g. community and economic development services).

There is also potential for local suppliers to benefit from business opportunities associated with the accommodation camp. This could include provision of food, drinks, transport, cleaning services or supplies, maintenance services or tradespeople proving installations or repairs. The potential for local businesses to benefit is likely limited to businesses in the larger centres of Goondiwindi, Wyallda and Moree, however ARTC is working with its partners to develop business capacity building strategies which will include interested residents in Toomelah and Boggabilla.

There is also the likelihood of some benefits to the North Star Sporting Club and potentially Boggabilla's Wobbly Boot Hotel during construction as workers may patronise them, however there are few other businesses in local communities that would benefit from personnel expenditure.

To ensure local businesses and service providers have the most up to date information on the Inland Rail, ARTC have included a 'Doing Business with Us' webpage on the Inland Rail website. This page has been promoted through the proposal's e-newsletters, community information sessions, Council meetings and project updates. ARTC have also co-hosted a Goondiwindi Chamber of Commerce 'Business after 5' event to further promote the Inland Rail and how to do business with Inland Rail.

ARTC will continue to work with local businesses, Chambers of Commerce, landowners and neighbouring community members to ensure local businesses are aware of the proposal and how they can maximise the available opportunities.

ARTC is also consulting with the Toomelah community to identify potential business opportunities and associated community development programs.

The proposal's strategies for increasing Indigenous, local, and regional business opportunities to supply the proposal are outlined in Section 8.6.

#### **7.4.5 Economic benefits**

The proposal is part of Inland Rail, a project which will make a strong contribution to regional, state and national development for up to 100 years. Inland Rail benefits which would support regional economic development include:

- Stimulating establishment of businesses or industry precincts which will generate employment as well as demand for industrial land and potentially residential development
- Improved linkages and reduced distances travelled within the national freight network
- Improved access to and from regional markets
- Reduced rail costs, improved reliability and greater certainty for freight travelling between Melbourne and Brisbane
- Catalysing complementary supply chain investments, including freight terminals, rail based warehousing and associated freight precincts.

### **7.5 Housing and accommodation**

This section describes the potential impacts of the proposal's temporary construction workforce accommodation camp, and the potential for impacts on housing or short-term accommodation.

#### **7.5.1 Workforce accommodation**

Local housing in towns such as Goondiwindi, Boggabilla and Toomelah is unlikely to be available to the proposal's workforce due to very low levels of rental availability (refer Section 5.3).

An accommodation camp will be required to house construction workers who live outside a safe daily driving distance from the study area. Criteria used to select the construction camp location included:

- Fatigue management requirements, i.e. distance between potential camp sites and the rail corridor
- Potential for negative social impacts on nearby communities
- Potential to benefit nearby communities through expenditure with local businesses or through provision of a positive social legacy
- Council and community views on camp locations

- Flooding considerations
- Availability of services e.g. sewerage, water, electricity and health services.

On this basis, potential sites near Boggabilla and North Star were identified for the construction accommodation camp location. The option for a camp near Boggabilla was discarded due to likely impacts on Boggabilla's services and the potential to adversely affect social dynamics.

ARTC engaged with the North Star Sporting Club who expressed interest in the option of using land owned by the Club to accommodate the camp. This is the site which has been assessed in the SIA.

ARTC has initiated consultation with GSC and the North Star community about the accommodation camp proposal (refer EIS Appendix D: Consultation summary) to identify specific local concerns. While the majority (84 per cent) of residents consulted supported the proposal, 16 per cent of residents consulted raised concerns including:

- Impacts on school access routes, community use and community events
- Impacts on North Star's utilities and infrastructure, particularly water supply, waste management and traffic management
- Workers' behaviour and community safety.

Consultation participants also identified the potential for amenity upgrade opportunities in North Star, and for business and employment opportunities to staff and service the camp.

The camp is proposed for land which skirts the Sports Club's main facilities (the clubhouse and fields) but is used by community groups including the North Star Pony Club, the North Star Trail Ride Association and the North Star Polo Club for events. ARTC has encouraged the North Star Sporting Club and the affected user groups to suggest strategies to mitigate impacts on community events and usage of the land, which may include changing the design or location of camp facilities on the land parcel, the potential to avoid construction activities in North Star during event weekends, and reconstructing affected uses such as equestrian sports fields in alternative locations on the land parcel. Inputs from these groups and GSC will be considered in finalising the camp's design and the contractor's Accommodation Camp Management Plan (ACMP).

As noted in Section 7.3.1, the population influx due to the camp could temporarily swell the North Star population to approximately 400 people at the peak of construction (inclusive of approximately 50 residents and 350 personnel). Planning for the accommodation camp has considered the availability of water, waste, energy, road and telecommunications infrastructure to support the camp's operation without affecting residents' access to services. ARTC is seeking approval for a fully self-sufficient camp accommodation including water, waste, and power services. ARTC will undertake a telecommunication service assessment and will implement mitigations to reduce any impacts on the existing telecommunication availability for North Star.

Whilst these measures will minimise impacts on local infrastructure, there is potential for impacts on services. ARTC is continuing to consult with local councils regarding waste management, sewerage treatment, water use and road use, and with NSW Police, Ambulance NSW and QAS regarding their capacity to address increased demands related to the non-resident workforce (refer Section 7.6.2).

Whilst peak traffic movements to and from the camp are unlikely to coincide with school's peak movement times, there is potential for increased traffic in town and past the school as a result of the camp's location. ARTC is seeking approval to install an access track on the northern side of the North Star township to minimise traffic movements past the school and in town. There is also potential for personnel behaviour to affect feelings of community safety in North Star, which is addressed in Section 7.7.5.



There would be an opportunity for local employment in staffing and servicing the camp. ARTC will require its accommodation camp provider to liaise with GSC, MPSC, GRC, employment agencies in the proposal region and community members in North Star regarding employment opportunities available in the accommodation facility e.g. camp management, maintenance, cleaning, kitchen services, and require the contractor to invite and consider job applications from residents in the proposal region.

Potential amenity upgrade opportunities in North Star include the likely need for a fuel depot during the construction period which is an opportunity for a third party (e.g. a local business) and could also be available to community members who otherwise need to travel at least 30 km to access fuel. There is also the possibility that increased trade from the proposal's personnel could support the North Star general store to re-open.

The accommodation camp could leave a positive legacy for the North Star community if facilities or infrastructure constructed for the camp are left in place following construction. This would have benefits for local residents, visitors to North Star and tourists. Potential legacies will be discussed as part of ongoing consultation with North Star residents and would include transfer of any ownership or responsibilities for facilities or infrastructure left as a legacy to the direct beneficiary, i.e. the landowner.

Issues which will be addressed as part of the proposal's ACMP and CEMP include:

- Management of traffic behaviour, including that of construction personnel and delivery drivers around North Star township and school
- The behaviour of personnel in town and within the camp with potential to affect safety or perceptions of community safety
- Effects on emergency and health service access if camp residents make demands on services
- The amenity and ongoing use of the North Star Sporting Club's facilities during construction.

### **7.5.2 Housing access and affordability**

The study area does not directly impact on the urban development of local towns and centres, or on the availability of housing stock.

During construction, accommodation will be supplied for all non-local construction personnel in the temporary workforce accommodation camp, and as construction contracts are time-limited, personnel are unlikely to seek to rent houses in the proposal region.

As outlined in Section 7.4.1, the proposal's operation is expected to include up to 20 personnel drawn from the proposal region and other regions, all of whom would return to their home bases after their shifts (for local personnel) or rosters (for non-local personnel) are completed, with no increase in housing demand or impacts on housing affordability or access expected in the proposal region. To the extent that indirect employment increases may increase local populations during construction, there may be some increased demand for housing, however the number of people settling locally is expected to be small and impacts on housing affordability are not expected.

There may be cumulative impacts on housing access as discussed in Section 7.9.

### **7.5.3 Short-term accommodation**

The non-resident workforce required for construction has the potential to increase demand for short-term accommodation in Goondiwindi and surrounding towns whilst they are working in or travelling through the region. Based on feedback from community consultation, short-term accommodation establishments in Goondiwindi are consistently in high demand.



The proposed accommodation camp would reduce the likelihood that construction personnel will make excessive demands on short term accommodation which would displace tourists and business travellers.

## **7.6 Access to services and infrastructure**

Community services and facilities have a vital function in supporting the health, education, cultural and other social development needs of communities, and in helping the development of friendship and support networks. The proposal's potential to affect service demand or the amenity of social infrastructure is discussed overleaf.

### **7.6.1 Education, childcare and community services**

As the majority of the proposal's construction workforce is expected to comprise local personnel and non-local personnel who would commute between the proposal and their homes or the accommodation camp, increased demands on existing education and childcare services are not expected.

A large laydown area (bounded by North Star Road, Capernum Street and Wilby Street) is proposed opposite to the North Star Primary School's grounds. The laydown area would be within 100 m of school buildings and within 30 m of school grounds. ARTC is consulting with the Department of Education and the school regarding the potential for noise, dust or traffic or impacts on the school's environment, and will enable relocation of the school's primary access point from North Star Road to David Street, which will improve safety of access to the school for the longer term. Parents and school staff may also be concerned that the presence of non-local construction workers at the laydown area would pose a threat to children's safety or privacy as discussed in Section 7.7.5.

As non-local construction workers would be in a remote location, there is little likelihood that they will increase demand for community services in the proposal region, and no likelihood that the amenity or use of community services would be directly impacted by the proposal. There is however potential for an increase in demand for support services to assist people to cope with environmental changes near Toomelah.

The operational workforce will be small and partly drawn from the local labour pool, so no significant increase is anticipated in demand for childcare places, school enrolments or community services in this proposal stage.

### **7.6.2 Health and emergency services demand**

Except for the Toomelah Primary School, and local social support within Toomelah, residents access most of their social and health services in Boggabilla or in Goondiwindi, and police and emergency services are provided from either Boggabilla or Goondiwindi. Car travel is generally used to access health and community services, as Boggabilla is some 12 km from Toomelah. Disruption to access along Tucka Tucka Road during construction may cause short delays in travel to services.

The construction workforce of up to 350 personnel may generate a small increase in demand for health services in the proposal region. For the most part this would involve minor injuries and illness attended to by GPs in Goondiwindi. GRC advised that Goondiwindi is well supplied with health and medical staff and therefore this short-term demand is not expected to be a significant burden on local services.

Increased demands on hospital and health services in Goondiwindi are also likely from non-local and local construction personnel. Smaller hospitals are highly tuned to their population's needs so this may require some adjustment to hospital and health service provision, which will require early communication from ARTC to Queensland Health. Patients requiring more complex treatment would be sent to the Toowoomba or Brisbane hospitals following initial treatment in the proposal region.

The proposal is located outside the boundary of population centres including Goondiwindi, North Star, Boggabilla and Toomelah. The closest permanent emergency response facilities to the study area are based in Goondiwindi and include Fire and Rescue Services, Ambulance and Police. The catchment of Goondiwindi's emergency services extends beyond the NSW/QLD border as far south as North Star. Boggabilla has a local police beat with up to five personnel, but Queensland Police Service (QPS) based in Goondiwindi also attend call-outs from south of the NSW/QLD border. Police and Rural Fire Services are also located in Boggabilla, with a Rural Fire Service also based in North Star.

The possible increase in traffic accidents associated with increased workforce commuter traffic, heavy haulage and construction vehicles may also increase demand on health, ambulance and police services. Traffic control assistance is also likely to be required for road works and oversized loads, placing increased demands on Police services. Communication with the North Star, Toomelah and Boggabilla communities regarding changes to traffic levels, road safety management and how to communicate with the proposal and the construction contractor (e.g. through 1800 numbers) will also be essential.

The construction camp will generate a temporary increase in demand for police and emergency services in the North Star area. Consultation with emergency services and GSC indicated that service capacity would need to be supplemented to address the increased population and activity levels in North Star. Employment of paramedic staff by the proposal will offset some of the demand for health and ambulance services.

During construction, emergency vehicle services may be periodically delayed at the construction sites for the grade-separated crossings of Bruxner Way and Tucka Tucka Road, and at the sites of level crossings. Large and oversize loads delivering construction materials and machinery to construction sites may cause occasional delays to response times.

ARTC will provide early advice to Queensland Health, NSW Police, NSW Ambulance Service, Queensland Ambulance Service and Fire and Rescue Services in NSW and in Queensland on the proposal's workforce ramp-up, planned roadworks, and its fire control systems. ARTC will also require its construction contractors and accommodation camp provider to maintain regular communication with Police and emergency service providers. ARTC has an existing protocol with NSW RFS, which will be extended to include NSW Police and NSW Ambulance, and their Queensland counterparts. This will include regular meetings between ARTC and the Police, Ambulance and Fire and Rescue services to review co-operative arrangements and ensure any safety or service access issues are identified and addressed.

With respect to operations, there are likely to be limitations in police and emergency services capacity to respond to any road/rail accidents, derailments, load loss or spills or other major incidents, which may place strain on services unless increased Government funding is allocated.

SIA consultation identified support among these service providers for the development of joint training and response exercises associated with rail and associated road incident management, to help build shared capacity and streamline procedures. It was also highlighted that the proposal would need to consider its requirements for recovery support services, as ambulance and emergency services generally focus on rescue and retrieval.

The operational workforce will not create any significant population increase and is therefore unlikely to result in any other significant increased demand for local health or emergency services.

Travel times will not be affected on the Bruxner Way. However, response times for emergency services may be delayed if encountering passing trains at level crossings. The worst-case scenario would be a delay of approximately two minutes (refer Appendix M: Traffic impact assessment), however in an emergency, such a delay can have serious consequences. To address potential impacts on emergency services and service response times during construction and operation.

ARTC will work with emergency services to develop protocols and joint working arrangements to address potential impacts on emergency services and service response times during construction and operation.

A protocol between the rail operator and emergency service providers, defining appropriate and co-ordinated responses and communication in the event of accidents and other emergencies would assist the efficacy and efficiency of emergency service responses.

### **7.6.3 Transport and utilities**

The proposal would require any intersecting utilities to be relocated or protected. The rail corridor traverses nine overhead powerlines, seven buried telecommunication cables and one water pipeline owned by MPSC. Due to double stacked clearance requirements, all crossings by the rail corridor would typically require the services to be modified. Of the 17 utilities located within the rail corridor, 14 are proposed to be relocated, one is proposed to have utility protection, and two are deemed unaffected.

There are no major structures along the proposed corridor requiring removal.

Consultation has commenced with the various utility providers regarding their requirements for relocation and/or protection of its impacted services by the proposal.

### **7.6.4 Waste management**

Potential sources of waste generation from the construction of the proposal would include spoil from excavation works, green waste from vegetation clearance, solid wastes including fencing, barriers and offcuts of materials, liquid wastes such as oils and chemicals, general waste from construction personnel and wastewater run-off including water utilised for dust suppression. Construction waste would be managed through the waste hierarchy established under the *Waste Avoidance and Recovery Act, 2001* (i.e. avoidance of waste, resource recovery, disposal of waste). Standard environmental management measures (based on the Waste Classification Guidelines) would be prepared prior to construction.

Consultation with GSC indicated that waste services in North Star are limited to a transfer station and fortnightly kerbside collection, which may not be sufficient with the increase in population generated by the construction accommodation camp. Council also identified limited septic treatment infrastructure in North Star, potentially requiring installation of a temporary treatment plant.

ARTC will consult with GSC regarding management of waste generated by personnel and the accommodation camp, to identify actions required to ensure waste management capacity in North Star is sufficient for the construction period.

## **7.7 Health and wellbeing**

This section discusses the proposal's potential to affect health and wellbeing in the proposal region.

### **7.7.1 Mental health**

The proposal is likely to have both positive and negative effects on community mental health. It represents a positive contribution to the regional community by increasing employment opportunities for up to 350 construction personnel and approximately 15 operations personnel. Access to stable employment supports mental health by enabling financial and housing security, self and family care, and social connections. However, the proposal also represents a risk to the community's mental health.

#### **Risks to the general population**

Anxiety is the most common mental health condition in Australia and can have a temporary or prolonged effect on a person's quality of life and day-to-day functioning (Beyond Blue, 2018). While most people can cope well with a level of stress, there is potential for stress related to the proposal to affect the health of some people, particularly those who live in proximity to the study area.

Research indicates that the impacts of major projects for people who oppose them can include increased stress levels, a sense of things happening beyond one's control and distress induced by environmental change (University of Melbourne, 2018). This may manifest in mental health issues such as anxiety and depression.

Community engagement findings to date for this SIA reveal concern within the community about the potential negative impacts of the proposal on residential and business amenity and farms. This includes concerns over the potential for flooding, impacting on viability of land use, livelihoods and safety, and disruptions to stock and machinery movement across the rail corridor. Concerns have also been expressed about the effect of noise, visual impacts, and dust on the amenity of properties, affecting residents' quality of life and possibly property values. Issues about road safety, disruption to connectivity within the community and within farming properties, and uncertainty about property acquisition processes, are also causing concern for residents near the study area.

Collectively, uncertainty and either perceptions or the reality of proposal impacts is likely to cause stress and contribute to anxiety and may affect some people's mental health. ARTC is undertaking continual communication and consultation with people who own properties that would be severed or bordered by the proposal and will identify all households where changes to noise levels, property severance or other impacts may cause distress to residents. ARTC will ensure the Construction Management Plan takes account of the specific needs of the owners affected and adjacent properties, to reduce the landowners' uncertainties about how impacts would be managed.

ARTC has a strong focus on creating a safe environment for all and supporting community wellbeing during the changes that Inland Rail would bring, including, in all proposal phases:

- Initiating a program-wide mental health partnership with an independent specialist service to support the mental wellbeing of community members in affected communities
- Providing training for proposal staff who have direct contact with community members (land access personnel community engagement personnel, and complaints staff) in how to recognise and respond appropriately to signs of stress
- Disseminating accurate, transparent and accessible information about the proposal to the community, including addressing community information needs about the acquisition process, the EIS process and outcomes

- Communicating transparently with the community about the proposal to alleviate uncertainty
- Identifying beneficial impacts and opportunities to promote community wellbeing, developed in consultation with the local community
- Supporting mentally healthy workplace practices on site and in accommodation camps
- Listening to and responding to community concerns and anxieties.

The proposal is expected to lead to the establishment of new and/or expanded businesses and industries, increasing employment opportunities for people in the proposal region, with the potential for mental health benefits for the individuals affected.

### **Risks to Aboriginal people's wellbeing**

Aboriginal people view health in a holistic context that encompasses mental health, physical, cultural and spiritual health, with land also central to wellbeing (National Aboriginal Community Controlled Health Organisation website). As Aboriginal concepts of health and wellbeing are deeply connected to country and cultural practices, impacts on natural resources and landscapes as discussed in Section 7.3.2: Community identity should be considered as part of proposal-related changes which may affect the Toomelah community which is nearest community to the proposal alignment.

The health and wellbeing profile for Boggabilla and Toomelah (refer Section 5.7.1) described the exposure of these communities to collective trauma, and severe and ongoing socio-economic deprivation. Toomelah carries a far greater burden of poor health than most Aboriginal communities, with extreme exposure to the drivers of mental illness, self-harming and suicide. Research has established a clear relationship between suicide and mental illness, and this relationship is strengthened when mental illness is combined with substance abuse and self-harm, which are prevalent in Toomelah (Toronto Public Health. 2014). This relationship extends to rail suicide (Centre for Research and Intervention on Suicide, Ethical Issues and End-of Life Practices, 2014). Evidence shows that access to a lethal means is a key risk factor in turning thoughts of suicide into actual suicide and a rail line provides such lethal means. The phenomenon of suicide clustering is a further risk, where suicide becomes prevalent in a community as a result of learned behaviours gained through exposure to other people exercising these behaviours, which is particularly problematic among teenagers and young adults (Ibid.) The prevalence of suicide in Boggabilla and Toomelah suggests that clustering may already be occurring.

Existing risk factors and the potential for Toomelah community members to access the rail corridor for suicide was raised in consultation. The proximity of the proposal within walking distance of Toomelah increases the opportunity for suicide by people with mental health issues or who are experiencing trauma. Rail suicide is usually fatal – few survive the incident (82 per cent of all rail fatalities in Australia in 2016/17 were suspected suicide) (Office of the National Rail Safety Regulator, 2017).

Suicide has a devastating impact on individuals, families and whole communities, particularly in Aboriginal communities where suicide occurs at approximately twice the rate of the rest of the population (Department of Health, 2018). A compounding issue for Toomelah and Boggabilla is the limited availability of support and services for treatment and prevention, a factor of remoteness, capacity, cultural appropriateness and trust. There are likely to be flow on effects of suicide-related trauma to the Boggabilla community who share family and friendships with the Toomelah community.

Trauma associated with rail suicide is not limited to families, friends and communities. Train drivers and rail employees who witness suicide incidents can experience severe mental, physical and emotional trauma with lasting impacts. In many cases employees cannot return to work (TrackSAFE Foundation, 2018). Rail suicide also creates significant demands and trauma for first response emergency services such as ambulance and police services.

Consultation with Toomelah community members also identified the potential for young children to access the rail corridor, and for young people to access the corridor out of boredom or a wish to engage in risk-taking behaviour.

These factors required careful attention to manage the proposal construction and operation near Toomelah. The risks of rail suicide and accidental death need to be removed to avoid introducing a fatal risk into the Toomelah community.

Proposal design measures which will reduce the risk of suicide include:

- The rail line would be elevated from Ch 29.4 km and the rail-over-road structure at Tucka Tucka Road would be inaccessible providing mitigation of the risk of people entering the corridor
- The nearest abutment (connection ground level) is located on private land, and out of sight of the Toomelah community
- The rail corridor and private land boundaries will all be fenced.

Rail safety programs (during construction and operation) are a key commitment for ARTC. ARTC will:

- Work closely with the Toomelah and Boggabilla communities, commencing prior to construction, to build awareness about the construction process and rail operations, and discuss how the rail safety program can be tailored for Toomelah
- Consult with the TrackSafe Association to identify best practice management strategies
- Monitor the outcomes of the Victoria's METRO's 'Dumb Ways to Die' campaign and adapt successful strategies for culturally appropriate use in the Moree Plains, Goondiwindi and Gwydir LGAs.

However, 'target hardening' and safety awareness strategies are only parts of the picture. Mitigation of risks to health and life in Toomelah needs to be multifaceted, long term and developed in close consultation with the Toomelah community, addressing elements of:

- Community and business development, to address unemployment as a driver for poor mental health
- Addressing changes to use of place or pedestrian connectivity (e.g. bush tucker areas and river banks)
- Education, training and employment participation
- Support for sporting teams and activities.

Reducing suicide and suicidal behaviour among Aboriginal and Torres Strait Islander peoples is a public health priority for all Australian governments (Department of Health, 2012) and would need to be a central feature of any mitigation strategy for the proposal. ARTC will be entering into a mental health partnership at a program level which will include a focus on Toomelah.



### **7.7.2 Community development**

The proposal has a significant opportunity to improve community wellbeing in Toomelah. The Community Development Employment Program (CDEP) implemented in Toomelah employed local residents in delivering services, running the local shop, maintaining streets and parks, operating the community bus, and maintaining local housing and infrastructure, however defunding of the CDEP in 2009 saw the loss of most jobs in the community. A recent consultation with the Toomelah community under the National Empowerment Program indicated that Toomelah continues to be “plagued by racism, poverty, appalling living conditions and community dysfunction (McGrady et al, 2013). Work is only available outside the town, but with low car ownership and the lack of public transport, most residents are not able to access it.

The experience of the CDEP demonstrates the potential for sustained employment to alter the social and economic conditions in Toomelah. A potentially positive impact of Inland Rail lies in the possibility of delivering sustained employment. However, it is unlikely that direct employment in the construction and operation phases alone would provide sufficient opportunity to help the community achieve and sustain recovery. Construction work will be temporary only, and the operational workforce small. Sufficient lead-time and investment in work readiness would also be needed to train and prepare the workforce for employment. Assistance with transportation may also be required, given the low level of car ownership and absence of public transport services.

There is an opportunity for the ARTC, Australian Government and Aboriginal organisations to work together on employment and training strategies and targets for Aboriginal workers. A community leader in Toomelah has indicated a willingness to facilitate the process of skill development and has identified opportunities for the proposal to align with current local training and employment initiatives such as vegetation management. ARTC will fund the employment of a Community Liaison/Development officer who can work with ARTC and other stakeholders to ensure Toomelah and Boggabilla community members benefit from the proposal.

To bring lasting benefit to the Toomelah community, a customised employment program underpinned by empowerment through community development as its primary purpose is needed, similar in nature to the CEDP program. Such an approach should only be adopted if it has the full support of, and is developed in partnership with the Toomelah community, and only if there is a sustainable source of Government funding to ongoing funding to sustain it in the long term. This will be raised by ARTC with the Community Connect steering committee which is coordinating government agency involvement in addressing social and economic issues in Toomelah and Boggabilla.

As noted in previous sections, the North Star community may experience a variety of impacts relating to the location of the laydown area and accommodation camp in their town, and as a result of cumulative impacts from the proposal and Narrabri to North Star. Consultation with the North Star community will identify initiatives which will assist them to cope with the changes and realise a long-term community benefit from the proposal.

### **7.7.3 Domestic and family violence**

Domestic and family violence (DFV) has significant immediate and longer-term impacts on the health and well-being of victims. While the reasons for domestic violence are complex, contributing factors include drug and alcohol abuse, mental health issues, stress, and trauma related to racial discrimination and disadvantage. Consultation with local police services noted a number of these complex issues within the nearby communities, including domestic violence, related to heavy drinking.



Improved access to employment could remove one trigger for DFV and reduce occurrences. However, heightened stress related to environmental changes, accessibility, concerns about flooding or noise associated with the proposal could increase the risk of violence. On balance, the proposal is not expected to have a significant impact either way on levels of DFV for the general population.

However, there is potential for both negative and positive impacts on DFV in the Toomelah community. If the proposal results in environmental changes which cause stress, it may trigger violence. However, if the proposal results in sustained investment in community development, empowerment and employment, it has the potential to reduce DFV by helping to restore purpose and dignity to the community.

#### **7.7.4 Health and environmental qualities**

Residents living near the proposal area have raised concerns regarding the effects of changes to air quality or the noise environment to affect their health, during either construction or operation, which is discussed below.

##### **Air quality**

Residents living near the proposal area have raised concerns about the potential for dust impacts on nearby houses or water tanks as a result of construction activities such as vegetation clearing or earthworks, or from construction vehicles on unsealed roads.

Dust generation will be managed through careful attention to meteorological conditions, specific management measures for activities which are likely to cause dust, construction traffic speed control, and regular water spraying. Dust during construction has been assessed as potentially causing a nuisance rather than any risk to health, however consultation with residents near the corridor will take care to identify individuals with asthma or respiratory conditions which may be worsened by dust and maintaining regular communication with them regarding dust-generating activities.

With respect to rail operations, stakeholders raised concerns regarding the potential for diesel emissions or dust from coal trains to affect the health of people near the rail corridor. The proposal will not accommodate coal trains. Diesel emissions contain concentrations of fine particulate PM<sub>2.5</sub> and PM<sub>10</sub> and are associated with harmful health effects, including cardiopulmonary and respiratory disease, and have been declared a carcinogen by the World Health Organisation (NSW Environment Protection Authority website. 2018) however there is limited research on concentrations of and human exposure to PM<sub>2.5</sub> emissions from diesel trains (Jaffe et al, 2015).

As described in EIS Chapter 17: Air quality, air quality assessment for the proposal's operation concluded that forecast concentrations are expected to be lower than the proposal goals at all identified sensitive receptor locations. On this basis, effects on health are not anticipated.

As noted in EIS Chapter 24: Hazard and risk, older infrastructure and previously disturbed land within proposal construction sites might contain asbestos. Construction activities that are likely to disturb asbestos will include reviewing the presence of asbestos and any requirements for specific controls for the work. In any activities that could potentially disturb asbestos containing materials, the proposal will adhere to ARTC Work Health and Safety Work Instruction for Asbestos, along with Safe Work Australia Model Codes of Practice pertaining to asbestos.

## **Noise and vibration**

As described in Section 7.1.2, the assessment of noise associated with the construction of the proposal (refer EIS Appendix J: Construction noise and vibration) indicates the potential for exceedances of the noise management levels at a small number of dwellings in North Star during construction, and there is also potential for night works to result in sleep disturbance whilst construction activities are near homes. Extended exposure to loud noise may affect hearing and increase stress levels, and sleep disturbance is known to affect health.

The proposal will implement the recommendations provided in EIS Appendix J: Construction noise and vibration and maintain communication with residents of all potentially affected dwellings to ensure that predicted impacts are tolerable. This consultation may also identify feasible corrective measures which would avoid sleep disturbance or increased stress related to noise from proposal activities.

Consultation with the North Star community regarding construction noise will be required on at least a quarterly basis. If residents identify noise that is causing stress or sleep disturbance, ARTC will modify construction activities (refer Section 7.1.2) to reduce noise exposure.

During operations, up to three dwellings near the proposal area may require mitigations (such as acoustic treatments) to avoid noise exposure which could affect health, including sleep. As discussed in Section 7.1.2, ARTC will consult with the owners of these properties to identify mitigation measures which will reduce noise exposure to acceptable levels.

## **Effects on people on the autism spectrum**

Toomelah residents have raised concerns regarding the impacts of construction noise or rail noise on children on the autism spectrum. The rail corridor would be more than 2 km from Toomelah, reducing the potential for noise to affect the Toomelah environment, however people with autism may be more sensitive to and distressed by unfamiliar and unexpected noise, which has the potential to affect their health (e.g. Stiegler and David, 2010).

ARTC will consult with the Toomelah Boggabilla LALC to identify any feasible measures which would reduce noise disturbances for people with autism. Potentially this could include programs to familiarise local children and other residents with construction sites, the rail corridor and rail transport, to reduce unknowns and enable more predictability regarding the source and frequency of any noises heard.

### **7.7.5 Community safety**

Feeling unsafe can influence levels of anxiety and can be a barrier to community participation and accessing services and can affect trust within a community.

Resident perceptions of personal safety in the Moree Plains LGA are low compared with residents in Gwydir LGA and rural and regional NSW, and relative to other local government areas in NSW the LGA Moree Plains LGA has some of the highest standardised rates of crime for assault (domestic and non-domestic), sexual offences and car theft (refer Section 5.7.4), and trust levels are likely to be low as a result.

During construction, the presence of laydown areas and corridor construction works near private homes might engender anxiety for some residents. Construction personnel will be working near homes, on 12-hour daily shifts. Their behaviour may contribute to noise impacts where work is proceeding close to homes and may also cause concerns regarding safety or security. Some landowners have also expressed concerns about the risk of theft during the construction phase of the proposal.

The location of the construction accommodation camp and laydown area at North Star will likely lead to concerns about safety of children walking between school and home or to the bus stop. Peak time for construction personnel's movements in North Star are likely to be around 6.00 am and 6.00 pm which would not coincide with the school's peak movement times (from 8.00 to 9.30 am and from 2.30 pm to 4.00 pm), or the hours of operations for school bus routes. However, construction deliveries are likely to occur at different times throughout daylight hours and would need to manage in accordance with the proposal's Traffic Management Plan to avoid any impacts on pedestrian traffic in and around North Star, and/or school bus routes. ARTC has proposed the inclusion of an access road within the proposal design to reduce traffic impacts past North Star Public School and in the village.

There may also be concerns about the safety or privacy of children due to location of a laydown area opposite the North Star Primary School. ARTC will consult with the North Star Primary School, NSW Education and NSW Police during planning for the accommodation camp and laydown area and develop co-operative strategies to address any concerns for traffic safety or other impacts on community values such as the family-friendly atmosphere.

Establishment of the construction workforce accommodation camp and laydown area will include communication between construction management representatives and directly affected and nearby property owners, to ensure there is a local 'face' to the proposal and that people know who to contact if they have any proposal-related concerns. ARTC will also ensure that the construction contractors have appropriate workforce conduct policies and procedures, along with complaints mechanisms which ensure fast and effective resolution to any issues experienced. A Code of Conduct containing requirements for positive behaviours and respect for local residents and businesses will apply to all contractor and proposal personnel.

Toomelah residents have expressed concern that, based on experience, they may experience racist behaviour from proposal personnel working near Toomelah. ARTC has a zero-tolerance policy for racist behaviour. ARTC will ensure that its Conduct Policy for proposal personnel defines and explicitly prohibits racist behaviour and will maintain regular communication with the Toomelah Boggabilla LALC to monitor any concerns.

No changes to personal or property safety are anticipated during the operation phase of the proposal, except for potential traffic related safety issues as addressed in Section 7.7.6.

Flood risk to private homes has also been raised as a concern by residents, as has the flood risk to Toomelah village. These risks are addressed in Appendix H: Hydrology and flooding.

### **7.7.6 Road safety**

During construction there will be large and oversize loads including deliveries of equipment and supplies (such as concrete sleepers and tracks) to laydown area delivery points. This will necessitate interaction between proposal traffic and public traffic, including school buses, which operate on several the roads affected by the proposal. There will also be increased traffic movement generated by employees from within the region driving to work sites. Consultation findings to date have raised concerns about the capacity and safety of construction traffic on North Star Road, which is narrow, poor quality and already very busy.

Impacts related to proposal traffic may include:

- Deterioration of some road surfaces due to truck weights
- Increased demands on emergency services to respond to accidents and over-sized vehicle escorts
- Safety issues associated with fatigued or inattentive commuters

- Dust from vehicle movements on unsealed roads
- Impacts on the movement of farm machinery and stock.

As noted in Section 7.1.3, assessment of traffic and transport impacts (refer EIS Chapter 20: Land use and property) indicates that impacts on the traffic network would primarily be during the construction of the proposal, when traffic volumes in excess of 10 per cent of the background traffic would be experienced. During operation, acceptable Levels of Service were estimated to prevail, with minimal impact to vehicle queueing and delay should the proposed level crossings be implemented.

ARTC's construction contractor will develop a Traffic Management Plan which has clear focus on road safety, fatigue management and interactions with rural roads and rural traffic. This will be supported by communication strategies to ensure stakeholders know about construction traffic routes, peak construction periods, the proposal's workforce conduct policies, and how to contact the proposal staff in the event of any concerns.

### **7.7.7 Rail safety**

A recent Queensland study has shown that driver decision-making at level crossings is affected by the amount of time needed to wait, with frustration and risky behaviour more pronounced when drivers had to wait for longer times. (Larue, 2016). Risky behaviours include driving through flashing lights to beat the train, driving around boom gates, and performing u-turns or back-up movements. The study also noted that collisions at level crossings are relatively infrequent, but the severity of collisions is high, and collision risk increases with an increase in the number of level crossings and magnitude of traffic flowing through them. Studies in North America have found that gender and age are also factors influencing behaviour at level crossings, with young male pedestrians more likely to cross against activated warning signals, and drivers aged 25 to 35 years more likely to commit violations at level crossings (Morant, 2015). School children, older pedestrians and those with disabilities were also found to be disproportionately represented in railway crossing fatality databases (Ibid.).

Risk taking behaviours are a concern in the proposal region. Toomelah residents have expressed concern about young people being bored and engaging in high risk behaviour late at night.

Impacts may include increased:

- Risk of serious injuries and fatalities at level crossings due to risk taking behaviours
- Frustration and anxiety triggered by long wait times, with potential individual health impacts.

ARTC has committed to developing and delivering culturally appropriate safety programs tailored for school students and community members in nearby communities.

The nearest rail crossing to Toomelah and Boggabilla would be grade separated, reducing the risk of collisions, however other level crossings may pose a potential risk. Road accident data show that Moree Plains Shire has a high rate of deaths from road accidents (more than twice the rate for NSW). Proposal design measures which will reduce the risk of suicide include:

- The rail line would be elevated from Ch 29.4 km and the rail-over-road structure at Tucka Tucka Road would be inaccessible providing mitigation of the risk of people entering the corridor
- The nearest abutment (connection to the rail corridor at ground level) is located on private land, and out of sight of the Toomelah community
- The rail corridor and private land boundaries will all be fenced.

### **7.7.8 Hazard and risk**

Landowners were concerned that the proposal could increase the risk of bushfire, either through construction activities or through sparks emanating from the rail corridor. The proposal's hazard and risk assessment (refer EIS Chapter 24: Hazard and risk) notes that construction and operational activities have the potential to increase the risk of bushfire by introducing ignition sources such as welding or providing additional fuel such as combustible liquids storage. Land which is predominantly used for grazing and agriculture, and rural residential properties, are vulnerable to damage or destruction by bushfire. The assessment also noted that the increase in the number of vehicles and machinery along the construction corridor has the potential to impact existing fire trails, reducing access to bushfire response.

Mitigation strategies which reduce the risk of contributing to bushfires are detailed in EIS Chapter 24: Hazard and risk. The design of the proposal will also ensure adequate emergency service access and provisions for sufficient water and first response personnel for firefighting purposes. Local fire authorities and local emergency services will be consulted to ensure appropriate operational actions are taken, such as providing feedback on the firefighting vehicles accessibility, Fire Prevention Plans and cooperation on burning-off activities.

ARTC operate rail infrastructure in bushfire hazard areas and have an established policy for bushfire hazards management. Existing ARTC management plans and strategies including Engineering Code of Practice – Right of Way, Fire Prevention Management and Total Fire Ban Engineering Procedures will be applied throughout the proposal lifecycle to minimise damage to property and maximise the safety of people.

The proposal's hazard and risk assessment (refer EIS Chapter 24: Hazard and risk) also identifies potential hazards falling into medium to high risk levels including incidents related to dangerous goods freight transport, trespass, pedestrian and community safety, interface with live trains and derailment, or involving travelling stock reserves, private access route, overbridges and emergency access.

Hazard mitigation measures have been developed for the proposal and will be applied throughout the lifecycle of the proposal. Controls include mitigation measures incorporated into engineering and design development, in addition to management strategies and procedures for construction and operations.

The management of risks throughout the life of the proposal will involve ongoing reporting, monitoring, reviewing and documenting the risks. The proposal will also ensure that the requirements of the safety management system are implemented and communicated to all personnel. Detailed emergency response provisions are also provided in EIS Chapter 24: Hazard and risk.

At the national level, the Inland Rail Business Case (ARTC, 2015) anticipates that the Inland Rail Program will remove 200,000 truck movements from roads each year, resulting in improved road safety, a reduction in serious accidents, reduced truck volumes in regional towns, and a reduction in carbon emissions.

### **7.7.9 Workers' health**

EIS Chapter 24: Hazard and risk has identified the potential for exposure to asbestos, respirable silica and other contaminants, and has recommended a series of work measures and the application of recognised codes of practice to mitigate risks.

Fatigue is also a risk to workers' health and safety. ARTC has an existing Fatigue Policy and the proposal will adhere to ARTC Work Health and Safety Work Instruction for Fatigue Management to ensure conditions of work of personnel align with the *Work Health and Safety Act, 2011* (WHS Act). For any work that would be required outside the ARTC Hours of Work Guidelines, the likely level of additional risks involved will be assessed and appropriate risk control measures will be identified.

## 7.8 Impacts of proposal decommissioning

The following assessment is preliminary in nature and would be reviewed at least five years prior to the proposal's decommissioning phase.

The following impacts are anticipated:

- A temporary increase in employment opportunities associated with decommissioning, followed by a net loss of jobs after proposal termination (including job losses associated with the operation of the proposal and in local enterprises dependent on access to an operating railway)
- Anxiety about loss of employment security related to the operation of the proposal
- Potential for road accidents associated with increased heavy haulage and over-size vehicles used to cart materials away, potentially impacting on health and emergency services.

Benefits would include:

- Removal of traffic safety hazards associated with level crossings leading to improved community safety and reduced demands on emergency services
- Reduction in the risk of rail suicide and rail accidents
- Decrease in demand on emergency services arising from rail-related incidents
- Reduction in noise, dust, visual and other environmental disturbances associated with the construction and operational stages of the proposal
- Improved travel times at decommissioned level crossings, noting there may be some residual impacts associated with permanent road closures and realignments
- Reduced anxiety associated with improved travel times, reduced noise and vibration disturbance
- Restoration of the quiet, rural nature of the pre-proposal community.

## 7.9 Cumulative impacts

Cumulative impacts are those that result from the successive, incremental and or combined effects of an action, project or activity when added to other existing, planned and or reasonably anticipated future ones (IFC 2013). This assessment has considered nearby projects':

- Spatial distribution (where they would be in relation to the proposal and nearby communities and landowners) as shown in EIS Chapter 26: Cumulative impacts
- Temporal distribution i.e. the time period in which each project may influence the social environment, as shown in Table 62.

Construction of the Newell Highway Upgrade (Mungle Back Creek to Boggabilla) is likely to be complete before proposal construction starts and has not been considered in the impact assessment, as the only likely long-term impact is improved traffic safety. Narrabri to North Star has been considered, in relation to successive (rather than coinciding) impacts.



The only likely cumulative impacts at the local level would be in North Star, where it is likely that sequential construction of NSNS and the proposal will result in up to four years' construction activity in the North Star area, with increased heavy traffic, large numbers of non-local workers and impacts on local character.

At the regional level, construction of the proposal may coincide with that of several Inland Rail projects and/or other major projects in South East Queensland. Assessment of these impacts would be speculative at best, particularly as construction personnel are highly mobile, but a requirement for up to several thousand construction personnel may be experienced in the northern NSW/southern and Queensland regions during 2021-2024. If multiple projects are constructed in the same time frame, there may be a significant draw on trades and construction labour. The expansion in construction activity would support additional flow on demand through the construction industry supply chain and additional spending on consumer orientated products by the construction workforce in the proposal region.

The associated supply of construction materials, the development of associated external infrastructure and complementary services will require additional workforce beyond those directly associated with Inland Rail, stimulating jobs and growth in the region (ARTC 2017).

There is also potential for the cumulative impacts of projects including Cross River Rail, Brisbane Metro, Inland Rail, other major infrastructure projects and coal mines to require significant construction workforces within a similar timeframe, leading to cumulative demands on construction labour across NSW and QLD, and potentially nationally. There are multiple uncertainties in relation to timing of these projects, so assessment has not been attempted. There is however potential for this to lead to draw from other industries, including agriculture, police and emergency services, and the range of businesses that depend on construction-related skills and labour.

Program-wide, the ARTC Business Case identifies that an anticipated additional 16,000 jobs will be required program-wide at the peak of construction with an average of 800 jobs per annum over the 10 year construction period. An average of 700 additional jobs per annum is anticipated over 100 years of operation (2024 to 2125). The 10 year delivery schedule would support economic activity in the regions and create regional jobs in Queensland, NSW and VIC during both construction and operations.

Inland Rail including the proposal would also have significant economic impacts by allowing for more efficient freight transport, supporting existing and new businesses, and resulting in increased road safety, lower congestion and less pollution from road freight.



**Table 62 Cumulative impact project set**

Project and location	Description	EIS status	Construction dates	jobs	Lifespan (years)	Relationship to proposal	Year						
							1	2	3	4	5	6-25	26-50
<b>Inland Rail B2G (ARTC)</b> NSW/ QLD Border to Gowrie	Inland Rail project comprising 146 km of new dual gauge track and 78 km of upgraded track from the NSW/QLD border, near Yelarbon, to Gowrie Junction	Project feasibility	2021-2024	Construction: 1,600 Operations: TBC	2025-2125	Potential overlap of construction period, cumulative impacts on Yelarbon area and labour draw							
<b>Inland Rail N2NS(ARTC)</b> Narrabri to of North Star in NSW	Inland Rail project comprising an upgrade to approximately 188 km of track within the existing rail corridor and construction of approximately 1.6 km of new rail corridor between Narrabri and North Star	Project assessment (late 2017 – late 2020)	Late 2020-late 2022	Construction: 180 Operations: TBC	2025-2125	Cumulative/successive impacts in North star area e.g. 4 years of construction activity							
<b>Newell Highway Upgrade, Moree and North Moree</b> <b>Narrabri to Moree and North Moree</b>	An upgrade of up to 30.2 km (in three segments) of new road pavement, intersection improvements and widening of road shoulders.	Preliminary Environmental Investigation (Nov 2017)	Unknown	Construction: 35-40 Operations: Not applicable	Unknown	Potential for coincidence of construction and increased heavy vehicle traffic on the Newell Highway							
<b>Newell Highway upgrade Mungle Back Creek to Boggabilla</b> 85 km north of Moree, Mungle Back Creek to Boggabilla	Major work to 18 km of new road pavement, 3.5 m wide lanes in each direction, intersection improvements, widening of road shoulders and provision of two new overtaking lanes	Environment Protection License acquired, construction commencing late 2018	Mid 2018 - 2020	Construction: 30 Operations: Not applicable	Expected completion in 2021	Unlikely that construction will coincide with the proposal							

Project and location	Description	EIS status	Construction dates	jobs	Lifespan (years)	Relationship to proposal	Year						
							1	2	3	4	5	6-25	26-50
<b>Bonshaw Solar Farm</b> Bruxner Way, 16 km south of Bonshaw and 66 km north of Inverell	Large scale solar photovoltaic generation facility and associated infrastructure with a capacity of 500 MW	SEARs issued by Major Projects Office	2021	Unknown		Approximately 100 km from the proposal. Potential increase of heavy vehicle traffic on the Bruxner Way.							

## 8 Social Impact Management Plan

This section outlines the objectives, outcomes and performance measures for mitigation of social impacts, and the actions that ARTC will undertake and/or require its construction contractor to undertake to avoid or reduce adverse impacts. Measures intended to enhance proposal benefits and opportunities are also provided, along with a framework to monitor SIMP implementation and effectiveness.

### 8.1 Introduction

Stakeholders in and near the study area, as well as members of nearby communities, could experience a range of social impacts as a result of environmental changes or social change processes resulting from proposal construction.

Impacts such as noise traffic disruptions as the result of crossing construction will be temporary as works move along the corridor. Impacts such as detractions from the character of North Star due to laydown areas and noise and disturbance to local character near the Macintyre River Viaduct may be experienced throughout the construction period.

Proposal-related changes to the environment which will commence in the construction phase and have an ongoing effect during operation include:

- Land acquisition, which could reduce the usable areas or change movement patterns on properties
- Changes to land use in the greenfield section of the proposal, with potential to affect farming uses within the study area
- The construction of a rail corridor and associated bridge structures and embankments, with potential to detract from local character, and increase noise levels near the Macintyre River Viaduct.

Social change processes are also possible as the result of proposal construction, and include:

- Distress and anxiety about impacts on agricultural properties or the landscape near Toomelah, which could affect the wellbeing of landowners and Toomelah residents
- Increased demands for emergency services, which could lead to strains on services' capacity to respond, if services are not adequately resourced
- Access to training and employment opportunities, which will build the local skills base and support the wellbeing of personnel and families
- Opportunities for local businesses to supply goods and services to the construction contractors, with potential to support business development.

During operation, without mitigation, there is potential for rail noise to affect the amenity of homes in North Star, impacts on the use of agricultural properties, and traffic delays at level crossings. Proposal operations also have potential for broader regional and State benefits, including support for regional economic development which will sustain employment and business activity for the long term.

### 8.1.1 Purpose and structure

The EIS includes detailed measures to mitigate and monitor environmental impacts which may result in social impacts. These strategies are summarised in the Environmental Management Plan (EIS Chapter 27: Environmental management plan) and detailed in the respective EIS Chapters and Appendices.

This SIMP provides the framework for mitigation of social impacts and enhancement of proposal benefits, and aims to:

- Provide guidance for the mitigation of negative impacts on landowners, nearby communities and the proposal region
- Support adaptive management of social impacts, by enabling communication between stakeholders and the proposal team as the design process progresses, to identify any need for improvements to management measures
- Describe ARTC's initiatives and partnership opportunities which will maximise local employment and business opportunities and bring about long-term benefits for local communities.

The SIMP includes measures that will be delivered during the post approval, pre-construction and construction stages.

Management measures are provided for:

- Community and Stakeholder Engagement (Section 8.2)
- Workforce Management (Section 8.3)
- Housing and Accommodation (Section 8.4)
- Health and Community Wellbeing (Section 8.5)
- Local Business and Industry (Section 8.6).

Actions plans are provided in each subsection and include:

- Objectives, outcomes and performance measures
- Measures to mitigate social impacts and enhance proposal opportunities
- The timing for delivery of mitigation measures, i.e. post approval, pre-construction and construction stages.

A monitoring program is provided in Section 8.8 to support tracking of SIMP delivery and effectiveness and enable adaptive management if there are changes to the proposal or social baseline values, and to address any emerging or unanticipated issues.

At the completion of the construction phase, ARTC will develop a SIMP for the operational phase in accordance with ARTC's established management frameworks for rail operation, including rail noise management, safety management, workforce development and stakeholder engagement.

### 8.1.2 Implementation

If the proposal is approved, it will undergo a detailed design phase which may result in changes to social impacts, e.g.:

- Design refinements may result in a change in the number or nature of property acquisitions
- Decisions regarding construction methodologies may result in changes to the location or duration of environmental impacts such as noise

- Construction contractors' innovations in impact management may change the frequency or level of impacts.

ARTC will continue to engage with stakeholders during the detailed design phase, to refine, develop and implement the measures outlined in this SIMP.

ARTC will contract a company to construct the proposal and will extend relevant SIMP commitments to the proposal's primary contractors.

Following approval of the proposal, ARTC and/or its construction contractors will work with key stakeholders to further detail:

- The actions to be undertaken
- Partnerships and projects to support mitigation and enhancement of benefits
- The respective responsibilities of ARTC and other stakeholders
- The program for implementation
- The SIMP monitoring program.

ARTC will have dedicated personnel to implement the SIMP, coordinate stakeholder engagement and partnerships, and support community and economic development projects.

At the completion of the construction phase, a SIMP for the first three years of the operational phase will be developed in accordance with ARTC's established management frameworks for rail operation, including rail noise management, safety management, workforce development and stakeholder engagement. This will be informed by the monitoring undertaken during the construction phase, which includes stakeholder engagement in monitoring impacts and the effectiveness of mitigation measures.

The SIMP for operations will be implemented during the first three years of operation. Any need for a SIMP following Year 3 of operations will be identified in consultation with the Department of Planning Infrastructure and Environment.

### 8.1.3 ARTC responses to key issues

ARTC's consultation with stakeholders and communities has identified potential impacts which have been addressed as part of the proposal's design or through social performance partnerships, as summarised in Table 63.

**Table 63 Proposal responses to key issues**

Impact Area	Proposal responses
<b>Proposal alignment</b>	<ul style="list-style-type: none"> <li>■ ARTC's consideration of proposal alignment options is detailed in EIS Chapter 3: Alternatives and proposal options. EIS Chapter 9: Rehabilitation strategy describes the consultation process which occurred in relation to the proposal's alignment</li> </ul>
<b>Potential flooding impacts</b>	<ul style="list-style-type: none"> <li>■ ARTC will continue working with stakeholders including directly impacted landowners, concerned landowners, local councils state departments and local flood specialists to inform and refine assessments and design, construction and operational phases of the proposal</li> </ul>

Impact Area	Proposal responses
<b>Severance and amenity impacts</b>	<ul style="list-style-type: none"> <li>Existing rail corridor used for 25 km to avoid direct impacts on private properties</li> <li>Proposal alignment placed along the border of private properties wherever possible to limit severance</li> <li>Macintyre Viaduct designed to address risks to community safety through changes to flooding patterns and pedestrian access to the rail corridor</li> <li>Working with property owners to ensure that a satisfactory level of access between adjoining properties is maintained, and to identify actions which will minimise or offset changes to connectivity or changes to water flows which may affect their properties</li> <li>Consulting with landowners to identify specific measures which will reduce impacts on farm connectivity or amenity.</li> </ul>
<b>Local business opportunities</b>	<ul style="list-style-type: none"> <li>Development of Sustainable Procurement Policy to ensure proposal supply opportunities are available to local businesses (within 90 km of the proposal)</li> <li>Identification of businesses within 90 km with potential capacity to supply the proposal.</li> </ul>
<b>Employment opportunities</b>	<ul style="list-style-type: none"> <li>Engagement with the Toomelah and Boggabilla communities, representative organisations and service providers to develop new local businesses</li> <li>Having a clear and efficient process for people to seek information about employment opportunities and to register their interest in Inland Rail.</li> </ul>
<b>Toomelah community impacts and benefits</b>	<ul style="list-style-type: none"> <li>Working with the Toomelah community and the Community Connect Steering Committee to identify education and training pathways, and employment opportunities for Toomelah residents during and post construction</li> <li>Supporting Toomelah residents to develop businesses which will service the proposal (e.g. traffic management) and support long term employment outcomes (e.g. a plant nursery).</li> </ul>
<b>North Star community impacts and benefits</b>	<ul style="list-style-type: none"> <li>Consultation with North Star residents regarding the proposed accommodation camp site and construction hours</li> <li>Inclusion of an access road within the proposal design to reduce traffic impacts past North Star Public School and in the village.</li> </ul>
<b>Community wellbeing</b>	<ul style="list-style-type: none"> <li>Comprehensive engagement with landowners to develop the flood model</li> <li>Consultation with landowners whose properties would be severed or bordered by the proposal to identify mitigation measures addressing impacts on farm management, access and residential amenity</li> <li>Engagement with North Star stakeholders and GSC regarding plans for an accommodation construction camp in North Star</li> <li>Initiating a Community Reference Group (CRG) which will be maintained throughout construction, with future need for the CRG to be agreed with CRG members and Department of Planning Infrastructure and Environment (DIPE) following the conclusion of construction.</li> </ul>

## 8.2 Community and stakeholder engagement

ARTC recognises that ongoing engagement with landowners, Gomeroi people, the Toomelah Boggabilla LALC, MPSC, GSC and GRC, local communities, businesses and other stakeholders that will be impacted by or stand to benefit from Inland Rail is central to the proposal's social licence to operate.

This section primarily addresses the proposal's post-approval, pre-construction and construction phases. The engagement framework will be further developed during the post approval stage to provide a Community and Stakeholder Engagement Plan to guide and monitor engagement activities to the end of the construction phase. This will include detailed measures to address:

- Communication with stakeholders regarding the EIS findings and management measures

- Cooperation with landowners who are directly affected by or adjacent to the proposal area throughout the detailed design phase, to address property-specific impacts
- Establishment of a CRG for the construction phase, to meet regularly with the purpose of providing timely, open advice, representation of community issues and concerns arising from the works.
- Discussions with GSC, MPSC and GRC on the proposal's schedule, progress, potential impacts and mitigations, and identification of partnership opportunities to maximise social opportunities
- Engagement with Government agencies to develop protocols, confirm the detail of mitigations for impacts on social infrastructure and develop joint response arrangements
- Cooperation with Toomelah residents, Traditional Owners and other Aboriginal parties and organisations with respect to cultural heritage values, training and development, employment and business capacity building
- Meetings and partnership discussions with local high schools and training providers, to develop training pathways for proposal construction and operation
- Engagement with local businesses and local Chambers of Commerce to identify existing skills, gaps in local capacity to work with major projects, and capacity building programs
- Promotion of operational employment and supply opportunities to local and regional residents
- Updating the proposal's webpage and other locally available communication materials to include:
  - The proposal's CEMP and SIMP
  - Quarterly construction updates, including detailed explanations of upcoming activities, workforce ramp-up and stakeholder engagement mechanisms
  - Environmental monitoring reports, including summaries that support easy interpretation
  - Community updates on maintenance and track works
  - Complaints and feedback mechanisms.

The proposal's Community and Stakeholder Engagement Plan for the construction phase will be reviewed annually and updated as required.

At the completion of the construction phase, ARTC will develop a Community and Stakeholder Engagement Plan for the commissioning and operational phases, which will include:

- Mechanisms for communication and co-operation with landowners and residents who live close to the rail corridor or who may experience impacts such as noise, dust, vibration or travel delays
- Promotion of operational employment and supply opportunities to local and regional residents
- Community updates on maintenance and track works
- Facilitation of access to train schedules for landowners, nearby communities and police and emergency services
- Complaints and feedback mechanisms.

The proposal's Community and Stakeholder Engagement Plan will be updated on a five yearly basis or as indicated by monitoring data (refer Section 8.8).



## Stakeholders

The key stakeholders addressed by the engagement framework outlined in Table 64 include:

- Landowners in and adjacent to the study area
- Residents and businesses in nearby communities (North Star, Toomelah, Boggabilla and Goondiwindi)
- Aboriginal community members and the Toomelah LALC
- GSC, MPSC and GRC
- Training providers
- Government agencies who plan or provide social infrastructure, including:
  - NSW and Queensland Health
  - NSW and Queensland Police
  - NSW and Queensland Ambulance Services
  - NSW Fire and Rescue and Queensland Fire and Emergency Services
  - NSW Department of Education.

ARTC will maintain a stakeholder register, building on the register developed during previous proposal phases, to ensure regular and consistent engagement with stakeholders. Stakeholder interactions will be documented in order to monitor the success of engagement and identify issues to be addressed as part of implementing the proposal's environmental management strategies.

## Engagement responsibilities

The construction contractor will be responsible for:

- Day-to-day stakeholder liaison relating to construction activities and management of environmental impacts
- Consultation with Councils with respect to agreed management measures
- The operation of the CRG
- Partnerships as agreed with the relevant stakeholders (e.g. community organisations and training providers).

During construction, ARTC will maintain:

- An oversight and monitoring role to ensure consultation activities are delivered in accordance with EIS commitments
- Partnerships with Councils and business organisations as identified during the detailed design phase
- Road/rail safety campaigns addressing the construction phase, and looking ahead to the operations phase
- Communication mechanisms including:
  - Free call number
  - Email addresses to ensure community members have direct access to the proposal team

- A reply-paid address for written correspondence from community members
- The proposal's webpage, including feedback mechanisms and an enquiry facility.

The Community and Stakeholder Engagement Plan will be reviewed annually during the construction phase, in consultation with the CRG, and updated as required.

### Action plan

The EIS includes a suite of measures to mitigate and monitor environmental impacts which may result in social impacts. These measures are summarised in the Environmental Management Plan (refer Chapter 27: Environmental management plan) and detailed in the respective EIS Chapters and Appendices.

Table 64 provides a framework for community and stakeholder engagement and includes:

- Objectives, outcomes and performance measures
- ARTC commitments
- Actions ARTC will undertake and/or require of its construction contractors to address:
  - The Toomelah community's surroundings
  - Rural amenity
  - The amenity or use of agricultural properties
  - The amenity and character of North Star.

**Table 64 Community and stakeholder engagement actions**

Community and stakeholder engagement actions	
<b>Objective</b>	<ul style="list-style-type: none"> <li>■ Establish and maintain engagement mechanisms which build relationships between ARTC and its stakeholders, and enable adaptive management of impacts on amenity, connectivity and community values during construction.</li> </ul>
<b>Outcomes</b>	<ul style="list-style-type: none"> <li>■ Cooperative and respectful relationships between ARTC, the construction contractor, construction personnel and community members</li> <li>■ Initiatives identified through stakeholder engagement have demonstrable benefits for local communities</li> <li>■ Stakeholder issues and grievances are identified, evaluated, addressed and recorded.</li> </ul>
<b>Performance measures</b>	<ul style="list-style-type: none"> <li>■ Stakeholder feedback confirms that they have access to timely and appropriately detailed information about the proposal, its impacts and management measures</li> <li>■ Community and stakeholder relationships facilitate information sharing and feedback to assist with adaptive management of social impacts</li> <li>■ Number of complaints received about construction activities</li> <li>■ ARTC responds to complaints from community members in accordance with its Complaints Handling Management Procedure (refer Section 8.2.3).</li> </ul>
<b>ARTC Commitments</b>	<ul style="list-style-type: none"> <li>■ Provide clear and consistent information about the Inland Rail Program and its associated projects</li> <li>■ Active engagement and effective communication with stakeholders and the community to enable ARTC to design, construct and operate Inland Rail with the least social impact</li> <li>■ Build a dialogue between landowners and ARTC about land access and acquisition processes</li> <li>■ Work with local communities to understand their concerns and identify ways these could be addressed</li> </ul>

## Community and stakeholder engagement actions

- Provide support to stakeholders and communities that are facing change due to Inland Rail
- Identify emerging social issues that need to be addressed at the project or program level
- Mitigate or compensate impacts on farm infrastructure, connectivity or farm management in accordance with ARTC agreements with landowners
- Regular communication mechanisms that will be maintained by ARTC throughout the approval, pre-construction and construction phases include:
  - Free call number
  - Email address to ensure community members have access to the proposal team
  - A reply-paid address for written correspondence from the community
  - The proposal's webpage, including feedback mechanisms and an enquiry facility
  - Proposal team availability to meet with stakeholders to discuss issues of specific concern
- Participation in community forums, networks and events.

## Measures – detailed design phase

### Impacts on the Toomelah community's surroundings and sense of place

- Establish a communication and engagement agreement with Toomelah Boggabilla LALC to discuss and refine mitigation measures identified in the SIA, develop identified business opportunities, and plan associated community and economic development programs
- Continue communication with Toomelah community, GRC and affected landowners to demonstrate how the proposal's design and construction methodology will reduce flooding risks
- Consult Toomelah residents about the potential to create an entrance statement to Toomelah, and/or name the bridge to recognise a local Indigenous leader or site.

### Impacts on the amenity or use of agricultural properties

- Establish communication between construction management representatives and directly affected and nearby landowners
- Ensure provision of community liaison staff to work with landowners who are directly affected by or adjacent to the study area, to address property-specific impacts as part of the detailed design process (refer Section 8.2.2)
- Work with landowners to mitigate impacts on their water management infrastructure which may include re-alignment of water pipelines or dams
- Agreements with the owners of properties on which borrow pits would be located will consider the amenity of other sensitive receptors and potential for increased traffic on rural roads.

### Impacts on the amenity and character of North Star

- Meetings with North Star stakeholders including community members, GSC, the North Star Sporting Club, the North Star Primary School, Department of Education, police and emergency service providers to discuss construction and accommodation camp arrangements, social and environmental impact management measures, and engagement mechanism during the construction phase

### Concern about impacts on property values

- Commitment to a comprehensive range of environmental and social impact management strategies which will reduce the potential for impacts on amenity, use or environmental qualities of properties near the rail corridor
- Communication of commitments to environmental management and EIS approval conditions to local and regional community members, to reduce the likelihood of negative perceptions about the amenity value of properties or near the study area

## Community and stakeholder engagement actions

### Measures - pre-construction phase

#### Impacts on the amenity or use of agricultural properties

- Complete property-specific agreements for directly affected properties (those affected by severance, temporary or permanent use of land or noise exceedances), including landholder access to mapping and construction plans as relevant to each property, information and negotiations about fencing, machinery and stock crossings
- Consult with the owners of the properties where construction noise would trigger eligibility for noise mitigation, and agree property-specific mitigations which may include architectural treatments and upgraded fencing
- Develop property-specific agreements to ensure construction activities are managed in accordance with ARTC's agreements with the landowners, with a focus on noise, dust, water access/storage and/or groundwater as relevant and including communication and co-operation with landowners during flood alert and recovery periods
- Provision and promotion of a complaints and feedback mechanism accessible to all local stakeholders (refer below)
- Consult regularly with the North Star community and residents living near the alignment (within approximately 500 m) regarding construction noise.

#### Impacts on the Toomelah community's surroundings and sense of place

- ARTC or its construction contractor will provide a Community Liaison worker to work with the Toomelah and Boggabilla communities, GSC, GRC and MPSC and other stakeholders prior to and throughout the construction phase, to implement and monitor mitigation measures, and enable strategies to support sustainable community benefits
- Discussions with MPSC, GSC and GRC on the schedule, progress, potential impacts and mitigations for the proposal, and identification of partnership opportunities to maximise social opportunities, e.g. legacy values, employment opportunities, business involvement in the proposal's supply chain.

### Measures – construction phase

#### Anxiety about the proposal's potential impacts on amenity and flooding

- Communication with directly affected landowners and the North Star, Toomelah and Boggabilla communities regarding the proposal, EIS findings (in particular regarding noise impacts and flooding) and management measures, changes to traffic levels, road safety management and how to communicate with the proposal and the construction contractor.

#### Impacts on the amenity rural properties and North Star

- Engage with affected stakeholders if critical works or night works are required outside of the proposed seven-day working roster to provide information about the nature and duration of works, and ensure stakeholders have access to contact details for proposal personnel who can mitigate noise impacts at the source (e.g. baffling of equipment or suspension of noisy activities) in response to complaints
- Regular engagement with the North Star community to monitor residents' experience with construction noise impacts and refine noise mitigation measures if required

#### Access to information about the proposal

- Update the proposal's webpage and other locally available communication materials to include:
  - The proposal's EMP and SIMP
  - Quarterly construction updates, including detailed explanations of upcoming activities, workforce ramp-up and stakeholder engagement mechanisms
  - SIMP and EMP monitoring and review reports.

### **8.2.1 Community Reference Groups**

The construction will facilitate the operation of a proposal Community Reference Group (CRG) during the construction phase. The CRG will meet regularly until completion of construction to provide timely, open advice about the proposal, enable representations of community issues to ARTC and facilitate community review of the effectiveness of SIMP measures. The CRG will:

- Provide a channel to inform communities about the construction phase of the proposal
- Provide feedback to ARTC about construction plans and programs
- Receive updates on SIMP implementation
- Provide feedback on mitigation and enhancement measures which need to be reconsidered or refined.

ARTC will ensure community members and other stakeholder have access to CRG proceedings by providing endorsed copies of minutes and other meeting records for the public record and display on the proposal's webpage.

### **8.2.2 Community Liaison Officer**

A Community Liaison Officer will be provided during the construction period, to:

- Establish and maintain a process for receiving, recording and responding to complaints in relation to construction issues
- Support communication between the contractor and community members and other stakeholders
- Provide advice to the contractor during the construction phase in relation to mitigating the impacts of construction activities on the community
- Provide information to the wider community in relation to construction programming, the nature of construction work, and impact mitigation measures.

### **8.2.3 Complaints and feedback procedure**

The Inland Rail Complaint Management Handling Procedure applies to all employees of ARTC Inland Rail and to all contractors and site visitors. The aim of the procedure is to ensure that complaints are dealt with efficiently and effectively, and that stakeholders have confidence in the organisations complaint system.

Complaints about ARTC Inland Rail policies, operations, activities, and projects can be lodged by any member of the public, landholder or other stakeholder. Information on where and how to lodge a complaint is readily available through established ARTC Inland Rail communication channels.

ARTC Inland Rail ensures the complaint process is flexible and no one is excluded from making a complaint. Where necessary, ARTC Inland Rail staff will assist those stakeholders requiring assistance to lodge a complaint.

The Complaint Management Handling Procedure includes the following steps:

- Acknowledge: upon receiving a complaint, ARTC Inland Rail staff will take reasonable steps to ensure that the complaint is properly understood and seek clarification or additional information from the complainant where required. ARTC Inland Rail will report the complaint in Consultation Manager and forward it to the relevant area for appropriate action or information. Where sufficient stakeholder contact details have been provided all complaints will receive formal written acknowledgment of complaint receipt within two business days.

- **Assessment:** A preliminary assessment of the complaint will be conducted to determine whether the complaint is one which ARTC can resolve, or needs to be referred to another appropriate agency or party (for example a local council or government agency)
- **Planning:** Complaints that are straightforward can often be resolved on first contact. If this is not the case and the complaint requires investigation, a plan will be prepared, defining what is to be investigated, the steps involved in investigation, the remedy the complainant is seeking and other possible remedies
- **Investigation:** ARTC will investigate the complaint, based on the principles of impartiality, confidentiality and transparency
- **Response:** the progress of the complaint will be monitored and communicated to the complainant, until the outcome has been communicated to the complainant
- **Follow-up:** complainants will be offered the opportunity to seek review of how their complaint was handled and resolved. If a complainant is dissatisfied with an investigator's findings or decision, a review will be carried out by an ARTC officer who has not been involved in the matter. If the complainant is still dissatisfied with the outcome, they will be advised of independent review bodies or mediation mechanisms that are available.

ARTC will regularly monitor the quality and effectiveness of the complaints management system and revise relevant components where appropriate, based on feedback from internal and external sources.

ARTC's stakeholder management system will be used to record details of complaints and their resolution for issues analysis and reporting purposes.

### 8.3 Workforce management

Construction of the proposal is expected to offer up to 350 jobs during 2021 and 2025

One of ARTC's primary aims is to maximise employment opportunities for proposal region residents, by:

- Facilitating skills development opportunities through the Inland Rail Skills Academy to build regional capacity in construction and rail
- Building partnerships with training providers to strengthen workforce skills in the proposal's area of social influence
- Requiring primary construction contractors to employ locally, and to implement workforce training and diversity strategies.

ARTC commits to providing a safe and healthy workplace for all personnel, and to ensuring that workforce behaviour avoids impacts on community safety, residents' privacy and community values.

This will require cooperation between ARTC, the construction contractor and a range of stakeholders as outlined below.

Table 65 summarises the workforce action plan which pertains to the proposal's post approval, pre-construction and construction phases.

The availability of construction labour changes rapidly in response to the cumulative impacts of major projects across Australia. ARTC will undertake a skills audit to identify the types of skills it requires as the basis of engaging with training partners. Analysis of the likely availability of construction labour from the proposal region will be required prior to construction, to enable the refinement of local and regional recruitment and training strategies.

As part of the procurement and contracting process, primary contractors will be required to document their proposed training strategies for the construction phase. This will form a key input to the tender evaluation tender process. During the construction period, construction managers will be required to report to ARTC on the delivery and outcomes of training strategies.

ARTC is also establishing the Inland Rail Skills Academy which will support community benefits such as support for Science Technology Engineering and Mathematics (STEM) training in schools, apprentice and trainee support programs, a skills exchange program and a scholarship program.

The Inland Rail Skills Academy comprises four pillars:

- Education: STEM and trades education in schools and university scholarships into Inland Rail related professions, e.g. engineering, project management
- Skills and training: apprenticeships and traineeships and gaining industry accreditation to support employment into Inland projects as well as other major regional industries
- Business capacity building: for small-to-medium enterprises to understand and meet major projects' supply chain requirements and enhance the value proposition of local business chambers and business groups
- Inland Rail staff training and inductions: opportunities for staff to increase skills in a range of areas including safety and sustainability.

The partnerships and projects which make up the Skills Academy are in progress, with a comprehensive program of development planned in 2020.

The Inland Rail Skills Academy will cooperate with stakeholders to develop and implement training and development partnerships which will equip local jobseekers for jobs in proposal construction.

This will help to ensure that young people and Indigenous people in the proposal region have the opportunity for skills training which will equip them for the construction industry and will be transferrable to future major projects. It will also result in an increase in the skilled labour force in the proposal region.

As many social impacts and opportunities associated with Inland Rail will emanate from construction contractors' activities, procurement processes and construction contracts will contain targets relating to social performance. ARTC will work with its construction contractors and other stakeholders such as training providers to ensure the proposal achieves employment of local residents.

In addition to strengthening the Proposal region's skills base and ensuring local employment in the proposal, ARTC's aims to ensure that the proposal is constructed and operated in a manner which protects the health and safety of the local community. ARTC will require the construction contractor to ensure that proposal personnel behave in accordance with a Workforce Code of Conduct approved by ARTC to avoid community concerns about personnel behaviour and ensure all personnel respect the privacy and safety of nearby residents.

Strategies undertaken during the construction phase will also address development of capacity of the local and regional workforce for employment in the operational phase. Management of the proposal's operational workforce will be in accordance with ARTC's established training, recruitment and employment strategies.

## Action plan

Table 65 summarises workforce management and development objectives, outcomes and actions which will maximise the employment of people from the proposal region and Indigenous people in the construction workforce, and increase the skills profile of the proposal region's labour force.



ARTC and its primary contractors will use multiple platforms to advertise job opportunities, and promote the availability of employment Expression of Interest forms through community forums, newsletters and Inland Rail websites (see for example <https://inlandrail.artc.com.au/work-with-us>). The implementation of the Inland Rail Skills Academy programs is expected to increase local labour force skills, and mitigate the potential to exacerbate skills shortages.

There is also the potential for people from local communities to gain employment in proposal operations, with roles available in maintenance of the rail corridor, environmental management and signalling. Actions initiated during the construction phase will address development of capacity of the local and regional workforce for employment in the operational phase. Management of the operational workforce will be in accordance with ARTC's established training, recruitment and employment strategies.

ARTC and its primary contractors will use multiple platforms to advertise job opportunities, and promote the availability of employment Expression of Interest forms through community forums, newsletters and Inland Rail websites (see for example <https://inlandrail.artc.com.au/work-with-us>).

**Table 65 Workforce management**

Workforce management measures	
<b>Objective</b>	<ul style="list-style-type: none"> <li>■ Enable residents of nearby communities and the proposal region to access the proposal's construction and operational employment opportunities.</li> </ul>
<b>Outcomes</b>	<ul style="list-style-type: none"> <li>■ Local contractors and job seekers within the proposal region are engaged in proposal construction</li> <li>■ Local Aboriginal people are involved in the proposal's workforce.</li> </ul>
<b>Performance measures</b>	<ul style="list-style-type: none"> <li>■ The proposal's construction workforce includes people from Toomelah, Boggabilla, and the proposal region as a whole</li> <li>■ Local and regional residents are considered for operational employment roles</li> <li>■ Number of Aboriginal people from the proposal region during construction phase.</li> </ul>
<b>ARTC commitments</b>	<ul style="list-style-type: none"> <li>■ Contractors and operators will be required to seek workers from within the proposal region for the construction workforce</li> <li>■ Work with construction contractors and other stakeholders such as training providers to ensure the proposal achieves employment of local residents</li> <li>■ Have regard to the NSW government Infrastructure Skills Legacy Program goals</li> <li>■ Establish the Inland Rail Skills Academy to support community benefits such as support for (STEM) training in schools, Apprentice and Trainee support programs, a skills exchange program and a scholarship program</li> <li>■ Provide a clear and efficient process for people to seek information about employment opportunities and register their interest in Inland Rail will be provided</li> <li>■ Work with Indigenous communities, industry and government agencies to support the design and delivery of training and development programs to improve local capacity where this is needed</li> <li>■ Work with key partners to link training and development programs with other projects and local industries to provide the greatest regional benefit</li> <li>■ Work with schools and local training providers to provide appropriate training</li> <li>■ Work with the Australian Government to provide long term outcomes through training, mentoring and other support programs</li> <li>■ Work closely with Aboriginal community to strengthen community members' capacity for employment, encourage applications and increase the number of Indigenous people applying for proposal-related jobs</li> <li>■ Provide a workplace that is inclusive and values the contributions of Aboriginal and Torres Strait Islander employees.</li> </ul>

Workforce management measures	
<b>Measures – detailed design phase</b>	<p><b>Training and employment opportunities for Indigenous people</b></p> <ul style="list-style-type: none"> <li>■ Consult with community and government agencies in Toomelah and Boggabilla and the Toomelah LALC to identify people with relevant qualifications, experience and aptitudes, and identify and address gaps in their readiness for work as part of the proposal's construction phase</li> <li>■ Work with traditional custodians and the Toomelah and Boggabilla communities to reach agreement on employment and training strategies for Aboriginal workers</li> <li>■ Cooperate with the NSW Government's Communities Connect Steering Committee and Department of Infrastructure, Transport, Cities and regional development (DITCRD) with regard to training and employment initiatives with Toomelah and Boggabilla communities</li> <li>■ Ensure the contractor is aware that the Toomelah Boggabilla LALC has advised that recruitment and retention of personnel from Toomelah would be improved by allowing them to return home at night, which may require consideration of any transport needs for personnel.</li> </ul>
<b>Measures - pre-construction phase</b>	<p><b>Training and development</b></p> <ul style="list-style-type: none"> <li>■ Undertake consultation and partnership discussions with proposal region high schools, Training Services NSW, TAFE NSW New England, TAFE Queensland Goondiwindi and the Toomelah Boggabilla LALC, to develop training pathways for proposal construction and operation</li> <li>■ Commence implementation of Inland Rail Skills Academy initiatives in the proposal region</li> <li>■ In partnership with Training Services NSW and DITCRD, support training programs which equip local people for construction employment.</li> </ul> <p><b>Local employment</b></p> <ul style="list-style-type: none"> <li>■ Provide information to nearby communities regarding the construction timeframe, employment opportunities and how to express interest in employment or contracting opportunities</li> <li>■ Establish a Local Employment Register to track and monitor participation in construction employment by people from the proposal region, including identification of Indigenous personnel with their agreement.</li> </ul>
<b>Measures – construction phase</b>	<p><b>Local employment</b></p> <ul style="list-style-type: none"> <li>■ Set targets for local and Indigenous employment and require the construction contractor to report on the outcomes of their training and recruitment strategies</li> <li>■ Maintain support for training programs which equip local people for construction employment</li> <li>■ Monitor the construction contractors' reports on local and regional employment, and Indigenous employment</li> </ul> <p><b>Training and development</b></p> <ul style="list-style-type: none"> <li>■ Continue implementation of Inland Rail Skills Academy initiatives</li> <li>■ Monitor the construction contractors' reports workforce training and development, including Indigenous participation</li> <li>■ Consult with high schools, Training NSW and TAFE facilities in the proposal region to identify young people and groups of young people who could be supported to obtain employment in the proposal's operations.</li> </ul>

## 8.4 Housing and accommodation

ARTC has developed program-wide accommodation principles for use when developing, selecting and deploying accommodation solutions, to support three desired outcomes:

- Accommodation solutions minimise negative social and economic impacts to potentially impacted communities

- Potentially impacted communities are consulted on accommodation solutions prior to them being decided
- Accommodation solutions contribute social and economic value to potentially impacted communities.

As the proposal is remote from population centres, a construction accommodation camp is proposed to accommodate all non-local personnel. The number of operational personnel who may choose to move to the proposal region would be very small. On this basis the proposal is unlikely to result in a significant increase in demand for housing or short-term accommodation in the proposal region during either construction or operation.

The construction accommodation camp is proposed to be located in North Star. There is potential for the camp to result in changes to the village's amenity and character, and to cause concerns about the safety of children attending the North Star Primary School. Consultation with the North Star community and the North Star Primary School regarding the accommodation camp proposal is ongoing and will identify any additional specific issues to be addressed as part of the ACMP, which will be a sub-plan to in the proposal's Construction Environmental Management Plan (CEMP).

Measures outlined in Table 66 address the management of the construction accommodation camp, and potential local benefits relating to business supply to the camp. This action plan also addresses the potential for a positive legacy for the North Star community which would have benefits for local residents and visitors to North Star.

Directly affected landowners have raised strong concerns that the proposal could affect property values. As noted in Section 7.2.4, property values may be influenced by environmental impacts, resulting from major infrastructure, the perception of impacts, and a range of factors unrelated to the proposal. Management of environmental impacts is addressed in detail in the proposal's Environmental Management Plan. Perceptions about impacts are addressed in Table 66.

**Table 66      Housing and accommodation**

Housing and accommodation measures	
<b>Objective</b>	<ul style="list-style-type: none"> <li>■ Avoid adverse social impacts on the North Star community and ensure local communities benefit from the accommodation camp's operation.</li> </ul>
<b>Outcomes</b>	<ul style="list-style-type: none"> <li>■ Accommodation is provided within the construction accommodation camp for all personnel from outside a safe daily driving range, as determined by the construction contractor</li> <li>■ The accommodation camp is operated in accordance with an ACMP developed in consultation with stakeholders and linked to the CEMP</li> <li>■ The proposal creates legacy benefits for the North Star community.</li> </ul>
<b>Performance measures</b>	<ul style="list-style-type: none"> <li>■ North Star community members and GSC agree that the accommodation camp management avoids significant impacts on the social environment or community values</li> <li>■ The proposal's accommodation requirements do not result in a decrease in housing availability in the proposal region</li> <li>■ Contractors' accommodation records confirm that accommodation is available for all personnel who require it</li> <li>■ Opportunities for legacy benefits are identified and implemented within 12 months of the accommodation camp being decommissioned.</li> </ul>

Housing and accommodation measures	
<b>ARTC Commitments</b>	<ul style="list-style-type: none"> <li>■ The accommodation camp will be planned and managed to avoid adverse social impacts on the North Star community and enhance economic benefits for local communities</li> <li>■ The camp service provider will use local providers and/or operators to keep camp-related expenditure spend in the local economy</li> <li>■ A workers' code of conduct will be implemented and enforced for all personnel.</li> </ul>
<b>Measures - detailed design phase</b>	<p><b>Impacts of construction accommodation camp</b></p> <ul style="list-style-type: none"> <li>■ Consult with the North Star Sporting Club committee, North Star Primary School, NSW Education and NSW Police to inform development of a draft ACMP that includes: <ul style="list-style-type: none"> <li>– maintaining the amenity and ongoing use of the Sporting Club's facilities during construction</li> <li>– co-operative strategies to address any concerns for traffic safety or other impacts on community values</li> <li>– behavioural standards for personnel</li> </ul> </li> <li>■ Finalise the ACMP and make copies available to stakeholders in North Star and GSC offices, and to Police and emergency services personnel</li> <li>■ Consult with GSC regarding waste management to identify actions which ensure waste management capacity in North Star is sufficient for the construction period</li> <li>■ Consult with GSC to identify existing water, drainage and road infrastructure in North Star which could be used by the proposal by agreement with Council and supplementation/upgrades required to water, waste or road infrastructure to accommodate construction phase demand.</li> </ul> <p><b>Property values</b></p> <ul style="list-style-type: none"> <li>■ ARTC will communicate its commitments to environmental management, and EIS approval conditions, to local and regional community members, to reduce the likelihood of negative perceptions about the amenity of properties in or near the study area.</li> </ul>
<b>Measures - pre-construction phase</b>	<p><b>Local business supply to camp</b></p> <ul style="list-style-type: none"> <li>■ Require accommodation camp provider to liaise with GSC, employment agencies in the proposal region and community members in North Star regarding employment and business opportunities to service the accommodation camp.</li> </ul> <p><b>Impacts of construction accommodation camp</b></p> <ul style="list-style-type: none"> <li>■ Consider the results of discussions between the North Star Sporting Club and facility user organisations in refining the accommodation camp design and ACMP</li> <li>■ Review and approve the construction contractor's ACMP</li> <li>■ Ensure that construction contractors and accommodation camp service providers: <ul style="list-style-type: none"> <li>■ Have and implement appropriate workforce conduct policies and procedures, including requirements for positive behaviours and respect for local residents and businesses</li> <li>■ Provide and promote a complaints mechanism which ensures fast and effective resolution to any issues</li> </ul> </li> <li>■ Employ paramedic and security staff to service the camp.</li> </ul>

## Housing and accommodation measures

### Measures – construction phase

#### Property values

- Ensure the proposal's construction is conducted in accordance with the proposal's approval conditions.

#### Local business supply to camp

- Require the camp service provider to ensure that a portion of its expenditure benefits businesses in the Gwydir and Moree Plains LGAs
- Extend ARTC's existing protocol with the NSW RFS, to include NSW Police, NSW Ambulance, and Queensland counterparts
- Require construction contractors and accommodation camp provider to maintain regular communication with police and emergency services.

#### Impacts of construction accommodation camp

- Maintain regular communication with North Star community members to monitor their satisfaction with accommodation camp management and workforce conduct.

#### Accommodation camp benefits for North Star

- ARTC will consult with the North Star community, North Star Sporting Club and GSC to identify and implement legacy opportunities for the North Star community
- Residents' views about the future use and appearance of laydown areas are identified and considered in rehabilitating these sites.

## 8.5 Health and community wellbeing

EIS Chapter 27: Environmental management plan outlines the management measures which are designed to prevent impacts on community health and safety as a result of environmental changes.

This section outlines the proposal's mitigation measures relating to:

- Stress and anxiety due to concerns about property acquisitions, potential impacts on amenity, changes to flooding patterns or environmental changes
- Changes to the environment near Toomelah, including changes to the amenity of the Macintyre River's surrounds in the vicinity of the Viaduct
- Noise exposure and other changes to amenity in North Star during construction
- The potential for impacts on the North Star school during construction
- Potential for increased demand for health and emergency services
- Concerns regarding traffic safety or community safety during construction and operation.

Stress and sadness about environmental changes may impact on people who are already vulnerable due to stressors such as flooding and drought, or to social disadvantage, and may impact on mental health.

The proposal's operation also presents the potential for accidents or suicides.

ARTC has established the Inland Rail Community Sponsorships and Donations Program. The purpose of the program is to support non-profit organisations, community groups, Traditional Owner groups, and local government entities with projects, events, and activities that will help achieve community and regional prosperity and sustainability. Eligible groups can apply for amounts between \$1,000 and \$4,000 for one-off, short-term projects or activities with a focus on the priority areas of culture, safety, environment, recreation and entrepreneurship.

The proposal will contribute to the Inland Rail program's social and economic benefits, which will be experienced at local, regional and national levels. The benefits of employment and local business participation in the supply chain are also likely to be experienced by some residents of nearby communities.

Table 67 provides management measures which, in together with the proposal's EMP and action outlined in other sections of this SIMP, are expected to mitigate potential impacts on health and wellbeing.

**Table 67 Health and wellbeing**

Health and wellbeing management measures	
<b>Objective</b>	<ul style="list-style-type: none"> <li>■ Avoid and minimise impacts which may affect community wellbeing including mental health</li> <li>■ Provide a framework for communication with social infrastructure providers and Government agencies to minimise proposal impacts on social infrastructure</li> <li>■ Maximise alignment and co-operation with local stakeholders to address social impacts.</li> </ul>
<b>Outcomes</b>	<ul style="list-style-type: none"> <li>■ Changes in amenity near the proposal area, in North Star and near Toomelah are managed to avoid impacts on community wellbeing, including initiatives to support mental health</li> <li>■ Cooperation with health, police and emergency services to manage any additional demands for services</li> <li>■ The proposal contributes to community wellbeing in Toomelah, Boggabilla and North Star through support for community initiatives which address local issues</li> <li>■ The project's design reduces the potential for rail accidents or rail suicide.</li> </ul>
<b>Performance measures</b>	<ul style="list-style-type: none"> <li>■ Issues such as noise, dust and delays to emergency response times are addressed to the satisfaction of affected stakeholders</li> <li>■ Police and emergency services are satisfied with the level of cooperation between them and the proposal</li> <li>■ The proposal makes a demonstrable contribution to community wellbeing in Toomelah, Boggabilla and North Star</li> <li>■ The proposal's rate of rail related accidents and suicides during operations is lower than or comparable to other similar rail links in Australia.</li> </ul>
<b>ARTC Commitments</b>	<ul style="list-style-type: none"> <li>■ Maintain a focus on creating a safe environment for all and supporting community wellbeing during the changes that Inland Rail will bring</li> <li>■ Identify impacts and opportunities that have the potential to impact community wellbeing and develop, in consultation with the local community, appropriate programs or initiatives to address these</li> <li>■ Identifying opportunities and develop programs to improve safety outcomes for local communities</li> <li>■ Initiation of a program-wide mental health partnership with an independent specialist service to support the mental wellbeing of community members in nearby communities, which will include provision of services which are culturally appropriate to Aboriginal community members</li> <li>■ Ongoing engagement with Indigenous communities, families and Elders to support Indigenous personnel, underpinned by a high level of coordination between contributing programs and agencies</li> <li>■ Zero tolerance for racist behaviour.</li> </ul>
<b>Measures - detailed design phase</b>	<p><b>Impacts on wellbeing - Toomelah</b></p> <ul style="list-style-type: none"> <li>■ Proposal's grade separation over Tucka Tucka Road and proposal fencing designed to reduce the potential for people to access the rail corridor are maintained during detailed design</li> </ul>



## Health and wellbeing management measures

- Work closely with the Toomelah and Boggabilla communities to build awareness about the construction process and rail operations, and discuss how the rail safety program can be tailored for Toomelah and Boggabilla
- Consult with the TrackSafe Association to identify best practice management strategies
- Monitor the outcomes of the Victoria METRO's 'Dumb Ways to Die' campaign and adapt successful strategies for culturally appropriate use in the Moree Plains, Goondiwindi and Gwydir LGAs
- Support Toomelah community initiatives to mitigate loss of access to native vegetation in the existing non-operational rail corridor
- Address the potential exacerbation of complex social and health problems in Toomelah, in close consultation with the Toomelah community, including:
  - Support for community and business development programs
  - Education, training and employment participation programs
- Work with the Toomelah community to develop strategies to offset impacts on the landscape and its amenity near the Macintyre River Viaduct
- Consult with the Toomelah Boggabilla LALC to identify any feasible measures which would reduce noise disturbances for people with autism.

### Stress, anxiety and mental health

- Continue engagement with directly affected landowners during the detailed design process to address their specific concerns about land acquisition and the management of the proposal's environmental impacts
- Delivery of the program-wide mental health service partnership

### Increased demands for health and emergency services

- Provide early advice to NSW and Government emergency services agencies regarding workforce ramp-up and accommodation camp arrangements
- Engage with NSW Health, Queensland Health, NSW Police, Ambulance and Fire and Rescue Services and Queensland Police, Ambulance and Fire and Emergency Services to:
  - Identify any outstanding concerns regarding emergency service response capacity
  - Agree joint response protocols for accidents and emergencies during the construction phase.

### Community services and facilities

- Consultation with North Star Public School and Department of Education to confirm:
  - Noise modelling results and appropriate mitigations to protect the school's learning environment
  - Proposal fencing for North Star laydown areas
  - Fencing for North Star Public School
  - Design and construction timeframe for a new primary access to the school from David Street
- Undertake a telecommunication service assessment and implement mitigations to reduce any impacts on the existing telecommunication availability for North Star.

### Traffic Safety

- Develop a Traffic Management Plan with a clear focus on road safety, fatigue management and interactions with rural roads and rural traffic.

## Measures - pre-construction phase

### Traffic Safety

- Develop tailored and targeted rail and road safety programs for delivery to local schools, local young people and nearby communities
- Implement communication strategies to ensure stakeholders know about construction traffic routes, peak construction periods, the proposal's workforce conduct policies, and how to contact the proposal staff in the event of any concerns



#### Health and wellbeing management measures

- Develop an incident notification and reporting process, including providing information to the community if incidents occur.

##### **Mental health**

- Identify households where changes to noise levels, property severance or other property-specific impacts may cause distress to residents, and with their permission, ensure their specific circumstances are considered in the CEMP
- Ensure access is provided to communication and complaints mechanisms, and offer information on support services that can support their adjustment to change
- Consult with the owners of the properties which may be affected by rail or train noise to agree property-specific mitigations, which could include assistance for the relocation of homes on the same land parcels.

##### **North Star Primary School**

- Commence implementation of mitigations agreed with the Department of Education during the detailed design stage.

##### **Increased demands for health and emergency services**

- Develop joint training and response exercises with NSW RFS NSW Police, NSW Ambulance, and Queensland counterparts to build capacity for proposal-associated incident management
- Extend ARTC's existing protocol with NSW RFS, to include NSW Police, NSW Ambulance, and Queensland counterparts, to ensure effective communication, streamline procedures, and develop measures which mitigate impacts on emergency service response times during construction and operation
- Provide early advice to the Police, Ambulance and Fire and Rescue on the proposal's workforce ramp-up.

#### **Measures – construction phase**

##### **Increased demands for health and emergency services**

- Hold regular meetings with the Police, Ambulance and Fire and Rescue services to update advice on the proposal's workforce ramp-up, review co-operative arrangements and ensure any safety or service access issues are identified and addressed
- Develop a protocol between ARTC and emergency service providers, defining appropriate and co-ordinated responses and communication in the event of emergencies during operation to ensure emergency response and communications are adequate for the needs of the proposal and local communities
- Enable access to information on the schedule for train movements which would help first responders to navigate access arrangements during operations

##### **Impacts on wellbeing - Toomelah**

- Work with the Toomelah community to develop and implement strategies which mitigate impacts on their use of the Macintyre River and surrounds, and/or offset impacts on the landscape and connectivity, as agreed in the detailed design stage.

##### **Impacts on wellbeing - North Star**

- Consult with the North Star community regarding construction noise, traffic safety and any other impacts on amenity on at least a quarterly basis.
- If residents identify construction noise through the complaints management process that is causing stress or sleep disturbance, or other impacts on wellbeing, ARTC will modify construction activities to reduce noise exposure and/or address the cause of other impacts identified by residents.

## 8.6 Local business and industry participation

This section addresses impacts on agricultural businesses and describes ARTC's commitments to ensuring that local and regional businesses benefit from the proposal.

ARTC has conducted consultation with landowners to identify the potential for impacts on farms and grazing operations and has designed the proposal's alignment to minimise impacts on productive land and high value infrastructure. Property-specific agreements will address each of the issues identified by landowners, for consideration were possible in the proposal's detailed design CEMP.

Private level crossings are being designed in cooperation with the affected landowners to minimise impacts on connectivity which could affect movement patterns for stock, equipment and water.

ARTC is working with directly affected landowners to address their property-specific concerns as part of the detailed design phase and in the proposal's CEMP. This will include working with farm owners and business operators to reduce the potential for impacts on properties' direct access to the road network.

Roads which are connectors between producers and their markets include North Star Road, Forest Creek Road, Bruxner Way and Tucka Tucka Road. There is potential for road works to cause temporary disruption in access to markets via these roads during construction, however longer-term impacts on travel times are expected to be minimal.

ARTC is committed to providing full, fair and reasonable opportunities for capable local businesses to compete and participate in the proposal's supply chain. ARTC is also committed to ensuring that Indigenous businesses, including those located in the proposal region, are identified and supported to engage in the proposal's supply chain.

ARTC will implement Inland Rail's Sustainable Procurement Policy for the proposal. ARTC will report on supplier participation at the following levels:

- Local community: Referring to spend within the proposal region, with a focus on communities near the study area
- Region: Referring to spend with businesses located within LGAs within which the proposal is located
- State: Referring to spend within NSW
- National/ANZ: Referring to spend within Australia and New Zealand.

Indigenous business participation will also be tracked and reported as part of the SIMP annual review report.

ARTC has developed a Local Industry Participation Plan (LIPP) and will work with its various Service Providers, Consultants and Contractors in its implementation. ARTC holds responsibility for the development and implementation of the policies and procedures contained within the LIPP. As part of implementing the LIPP, ARTC expects that its contractors and operators will:

- Recognise that involving local industry in the Inland Rail Program will provide economic benefits to all parties and is crucial to the long-term development of a strategic manufacturing and service capability that underpins a strong and diversified economy
- Ensure that local industry is provided with relevant information in an equitable and timely manner, and that appropriate design and procurement strategies provide equitable access for local industry
- Seek to maximise levels of goods and services, including design services, from local companies where they are competitive with respect to cost, quality and timeliness.

Table 68 provides the framework for ensuring local and Indigenous business participation in the proposal.

**Table 68      Local Business and Industry Participation**

Local business and industry participation measures	
<b>Objective</b>	<ul style="list-style-type: none"> <li>■ Maximise local awareness of the proposal's supply opportunities and build relationships with local businesses</li> <li>■ Provide the framework for full, fair, and reasonable opportunity for local, regional and Indigenous businesses to participate in the supply chain and articulate this framework in construction tenders and contracts.</li> </ul>
<b>Outcomes</b>	<ul style="list-style-type: none"> <li>■ Demonstrated alignment of major contracts and contractors to the Sustainable Procurement Policy</li> <li>■ Businesses in the proposal region benefit from supply opportunities</li> <li>■ The proposal enables the creation of new Indigenous businesses.</li> </ul>
<b>Performance measures</b>	<ul style="list-style-type: none"> <li>■ Indigenous participation and local participation are included as a key element of all construction tender assessments</li> <li>■ Implementation of the Sustainable Procurement Policy</li> <li>■ Opportunities to support the development of Indigenous businesses are identified and implemented.</li> </ul>
<b>ARTC Commitments</b>	<ul style="list-style-type: none"> <li>■ Develop and implement Inland Rail's Sustainable Procurement Policy for the proposal</li> <li>■ Implement ARTC's Local Industry Participation Plan</li> <li>■ Consult with local and regional businesses to ensure they have access to current information about Inland Rail</li> <li>■ Have a clear and efficient process for businesses to seek information about opportunities and to register their interest</li> <li>■ Work with Government stakeholders to build businesses' capacity through business development, mentoring and other support.</li> <li>■ Work with local businesses (including Indigenous businesses) to strengthen the capacity of the local supply chain to participate</li> <li>■ Support Indigenous businesses to ensure they are prepared for and provided with opportunities to participate</li> <li>■ Work with key partners to link training and development programs with other projects and local industries to provide the greatest regional benefit</li> <li>■ Ensure Indigenous participation is included as a key element of all tender assessments</li> <li>■ Include Indigenous Participation targets in construction contracts and work closely with contractors to achieve agreed outcomes.</li> </ul>
<b>Measures – detailed design phase</b>	<p><b>Connectivity – agricultural businesses</b></p> <ul style="list-style-type: none"> <li>■ Ensure an appropriate level of access is maintained for landowners across and between properties that are affected by the proposal</li> <li>■ Traffic Management Plan will take into account peak traffic hours and periods, particularly during school and public holidays, and during harvest periods.</li> </ul> <p><b>Local participation in proposal supply chain</b></p> <ul style="list-style-type: none"> <li>■ Contact GSC, MPSC and GRC to identify approved quarry operations and seek their interest in supply opportunities</li> <li>■ Work with Toomelah, Boggabilla and Goondiwindi community members and services to develop a business plan and partnership agreement, subject to community agreement, to develop businesses that can service the proposal and/or develop to service other projects and industries</li> <li>■ Provide Information to businesses in the proposal region regarding construction program and business capacity building programs available as part of Inland Rail Skills Academy</li> </ul>

Local business and industry participation measures	
<b>Measures - pre-construction phase</b>	<p><b>Connectivity – agricultural businesses</b></p> <ul style="list-style-type: none"> <li>■ Provide information to landowners in and adjacent to the study area and in nearby communities regarding the roadworks schedule and any anticipated travel delays</li> </ul> <p><b>Local participation in proposal supply chain</b></p> <ul style="list-style-type: none"> <li>■ Liaise with the following stakeholders to quantify and locate specific business capacities of relevance to the proposal's supply chain: <ul style="list-style-type: none"> <li>– DITCRD</li> <li>– Regional Development Australia</li> <li>– Chambers of Commerce in Goondiwindi, Gwydir Shire and Moree Plains Shire</li> <li>– Moree and Toomelah Boggabilla LALCs</li> </ul> </li> <li>■ Provide Information to businesses in the proposal region regarding construction program and business capacity building programs available as part of Inland Rail Skills Academy</li> <li>■ Provide local business briefings to promote supply opportunities ahead of the construction phase</li> <li>■ Promote Government services and programs which are available to businesses considering investment in projects related to Inland Rail.</li> </ul>
<b>Measures – construction phase</b>	<p><b>Local participation in proposal supply chain</b></p> <ul style="list-style-type: none"> <li>■ Implement Inland Rail's Sustainable Procurement Policy for the proposal</li> <li>■ Provide information about the proposal to investors interested in opportunities facilitated by the proposal</li> </ul>

## 8.7 Monitoring and reporting

The purpose of SIMP monitoring is to:

- Track and enable reporting on delivery of management measures
- Ensure that mitigation and benefit enhancement measures are effective, and/or support identification of corrective actions to improve their effectiveness.

The monitoring framework provided in Table 69 outlines the desired outcomes, performance measures, data sources and timeframe for SIMP monitoring. ARTC will work with its construction contractor to set specific goals for:

- Training and employment of personnel from the proposal region
- Training and employment of Indigenous people
- Participation of businesses from the proposal region in the supply chain
- Provision of workforce accommodation
- Cooperation with residents and Councils in developing initiatives which will support community wellbeing.

Monitoring data on delivery of the SIMP will be reported at each CRG meeting (as available), and a report against performance measures and social indicators will be presented to the proposal region Councils and the CRG annually.

The monitoring program will be reviewed prior to operations, and then implemented for operations .

## 8.8 SIMP reviews

ARTC will track SIMP implementation and review performance measures quarterly, to facilitate continual improvement of strategies and practices.

The SIMP will be reviewed annually and updated based on monitoring data, including stakeholder feedback. This will include a process for reviewing social impact management measures to assess whether they are still appropriate, and whether any new issues or initiatives have emerged that should be included in ongoing mitigations and/or monitoring.

A review of the SIMP will be undertaken by an independent third party prior to construction, prior to commissioning of the proposal, and again during Year 3 of operations. These reviews will include consultation with Councils, nearby landowners, community members and representatives, and NSW Government agencies. The SIMP reviews will identify the effectiveness of SIMP strategies, and any changes which need to be made to the SIMP to ensure ongoing effectiveness. The results of these independent reviews will be made publicly available via Inland Rail's website.

As noted in Section 8.1.2, the SIMP for operations will be implemented during the first three years of operation and any need for a SIMP following Year 3 of operations will be identified in consultation with the Department of Planning Infrastructure and Environment.

**Table 69 Social monitoring framework**

Outcomes	Performance measures	Data sources	Monitoring frequency
Community and stakeholder engagement			
Co-operative and respectful relationships between ARTC, construction personnel and community members.	Stakeholder feedback confirms that stakeholders have access to timely and appropriately detailed information about the proposal, its impacts and management measures.	<ul style="list-style-type: none"><li>■ CRG feedback</li><li>■ Monthly monitoring of complaints and their resolution.</li></ul>	Quarterly
Initiatives identified through stakeholder engagement have demonstrable benefits for local communities.	Community and stakeholder relationships facilitate information sharing and feedback to assist with adaptive management of social impacts and benefits as confirmed by CRG feedback and records of refinements to SIMP measures	<ul style="list-style-type: none"><li>■ CRG feedback</li><li>■ Report on initiatives, agreements and partnership established through stakeholder engagement</li><li>■ SIMP review reports</li></ul>	Annual
Stakeholder issues and grievances are identified, evaluated, addressed and recorded.	Number of complaints received about construction activities, and trend in complaint numbers	<ul style="list-style-type: none"><li>■ Complaints register.</li></ul>	Monthly
	ARTC responds to complaints from community members in accordance with its Complaints Handling Management Procedures.		
Workforce management			
Local contractors and job seekers within the proposal region are engaged in the proposal's construction workforce.	The proposal's construction workforce includes people from Toomelah, Boggabilla, and the proposal region as a whole. Local and regional residents are considered for operational employment roles.	<ul style="list-style-type: none"><li>■ Construction employment register identifying personnel's home postcodes</li><li>■ Operational employment register identifying employees and contractor's home postcodes</li></ul>	Six-monthly
Local Aboriginal people are involved in the proposal's construction workforce.	Number of Aboriginal people from the proposal region employed during construction phase.	<ul style="list-style-type: none"><li>■ Construction employment register identifying Indigenous employees and contractors</li><li>■ DESSFB Small Area Labour Market unemployment data.</li></ul>	Six-monthly
Housing and accommodation			
The accommodation camp is operated in accordance with an ACMP developed in consultation with stakeholders and linked to the CEMP.	North Star community members and GSC agree that the accommodation camp management avoids significant impacts on community values.	<ul style="list-style-type: none"><li>■ CRG meetings</li><li>■ Quarterly consultation with North Star stakeholders.</li></ul>	Six-monthly

Outcomes	Performance measures	Data sources	Monitoring frequency
Accommodation is provided within the construction accommodation camp for all personnel from outside a safe daily driving range, as determined by the construction contractor.	Contractors' accommodation records confirm that accommodation is available for all personnel who require it.	<ul style="list-style-type: none"> <li>Construction accommodation register.</li> </ul>	Six-monthly
	The proposal's accommodation requirements do not result in a decrease in housing availability in the proposal region.	<ul style="list-style-type: none"> <li>Consultation with GRC, GSC and MSC</li> <li>Consultation with real estate agents in Goondiwindi</li> <li>SQM Research/Corelogic data on rental vacancy trends in Goondiwindi.</li> </ul>	Six-monthly
The proposal contributes to community wellbeing in Toomelah, Boggabilla and North Star through support for community initiatives which address local issues.	The proposal makes a demonstrable contribution to community wellbeing in Toomelah, Boggabilla and North Star.	<ul style="list-style-type: none"> <li>Employment records</li> <li>Local supply records</li> <li>Consultation feedback from Toomelah Boggabilla LALC and the CRG.</li> </ul>	Six-monthly
The proposal creates legacy benefits for the North Star community.	Opportunities for legacy benefits are identified and implemented within 12 months of the accommodation camp being decommissioned.	<ul style="list-style-type: none"> <li>Proposal records and CRG minutes.</li> </ul>	Once in 2024
<b>Community health and wellbeing</b>			
Changes in amenity near the proposal area, in North Star and near Toomelah are managed to avoid impacts on community wellbeing, including initiatives to support mental health.	Issues such as noise, dust and delays to emergency response times are addressed to the satisfaction of affected stakeholders.	<ul style="list-style-type: none"> <li>Consultation feedback from Toomelah Boggabilla LALC and the CRG</li> <li>Consultation feedback from North Star residents</li> <li>Complaints register</li> </ul>	Quarterly
Cooperation with health, police and emergency services to manage any additional demands for services.	Police and emergency services are satisfied with the level of cooperation between them and the proposal.	<ul style="list-style-type: none"> <li>Consultation with police and emergency services.</li> </ul>	Six-monthly
The proposal contributes to community wellbeing in Toomelah, Boggabilla and North Star through support for community initiatives which address local issues.	The proposal makes a demonstrable contribution to community wellbeing in Toomelah, Boggabilla and North Star.	<ul style="list-style-type: none"> <li>Consultation feedback from Toomelah Boggabilla LALC and the CRG</li> <li>Proposal records and CRG minutes.</li> </ul>	Monthly
The proposal's design reduces the potential for rail accidents or rail suicide.	The proposal's rate of rail-related accidents and suicides during operations is lower than or comparable to similar rail sections in Australia.	<ul style="list-style-type: none"> <li>NSW Police records</li> <li>ARTC records.</li> </ul>	Quarterly during operations



Outcomes	Performance measures	Data sources	Monitoring frequency
<b>Local business and industry</b>			
Demonstrated alignment of major contracts and contractors to the proposal's Sustainable Procurement Policy.	Indigenous participation and local participation are included as a key element of all construction tender assessments.	ARTC records.	Monthly
Businesses in the proposal region benefit from supply opportunities.	Implementation of Sustainable Procurement Policy.	Local and Indigenous suppliers register.	Monthly
The proposal enables the creation of new Indigenous businesses.	Opportunities to support the development of Indigenous businesses are identified and implemented.	Local and Indigenous suppliers register.	Monthly

## 9 Impact assessment

This section summarises the risk of social impacts and the significance of social impacts and benefits for communities and stakeholders in the proposal region. It considers the:

- Likelihood that social impacts and benefits will occur
- Consequence of social impacts and benefits for those affected
- Potential risk of impacts that would affect social conditions (such as rural uses, community character and housing availability) and the potential for community benefits, prior to the application of proposal-specific management measures which are detailed in Sections 7 and 8, and summarised in Table 72
- The risk of residual impacts after mitigations are applied (further discussed in Section 10).

Table 70 provides the social risk assessment ratings, which consider the likelihood and consequence of impacts and benefits to help identify the significance of social impacts and benefits.

The likelihood of social impacts and opportunities occurring has been assessed with reference to the social baseline (e.g. findings regarding community vulnerabilities), stakeholder inputs and the results of other technical assessments undertaken as part of the EIS.

‘Consequence’, as defined in Table 71, has been assessed based on how the social impact may be experienced by the relevant stakeholders, considering:

- The duration of impacts and benefits, being either short term (during construction) or long term (during operation)
- Sensitivity, including specific vulnerabilities and resilience to impacts
- The severity of potential effects on stakeholders, and magnitude of potential benefits.

**Table 70 Social risk matrix**

			Consequence Level				
			1 Minimal	2 Minor	3 Moderate	4 Major	5 Catastrophic
Likelihood	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 Ratings							
	Low		Medium		High		Extreme
	Proposal benefits and opportunities						

Source: NSW DP&E 2017.

All benefits are considered as positive, with the relative value of the benefit (1-5) qualitatively assessed in relation to the number of people it would benefit, the potential to address inequities such as high unemployment amongst local and Indigenous people, and the duration of the benefit.

**Table 71 Consequence criteria**

Rating	Impact (-)	Benefit (+)
<b>1. Minimal</b>	Local, small-scale, easily reversible change on social characteristics, or the values of the community of interest or communities can easily adapt or cope with change.	Local small-scale opportunities emanating from the proposal that the community can readily pursue and capitalise on.
<b>2. Minor</b>	Short-term recoverable changes to social characteristics and values of the communities of interest, or the community has substantial capacity to adapt and cope with change.	Short-term opportunities emanating from the proposal.
<b>3. Moderate</b>	Medium-term recoverable changes to social characteristics and values of the communities of interest, or the community has some capacity to adapt and cope with change.	Medium-term opportunities emanating from the proposal.
<b>4. Major</b>	Long-term recoverable changes to social characteristics and values of the communities of interest, or the community has limited capacity to adapt and cope with change.	Long-term opportunities emanating from the proposal.
<b>5. Catastrophic</b>	Irreversible changes to social characteristics and values of the communities of interest, or the community has no capacity to adapt and cope with change.	N/A.

**Source:** Adapted from Department State Development, Infrastructure and Planning (Qld.) Social impact assessment guideline July 2013.

Table 72 summarises:

- Potential social impacts and benefits as a result of the proposal
- Potentially affected or benefitted stakeholders
- Preliminary evaluation of the significance of potential impacts and benefits, considering ARTC's existing commitments
- Proposal-specific management measures
- An evaluation of residual significance, assuming ATC commitments and proposal-specific management measures are implemented and effective.

A monitoring framework which will support tracking of the delivery and effectiveness of SIMP measures is provided in Section 8.7.

**Table 72 Social impacts and benefits**

Impact area	Potential impacts	Phase	Nature	Stakeholders affected	Signif.	Proposal-specific measures	Residual Signif.
<b>Surroundings</b>							
<b>Settlement pattern</b>	Acquisition of privately-owned land will affect the use of part of some grazing and cropping properties but is unlikely to affect other aspects of the proposal region's settlement pattern.	C	-	Directly affected landowners.	A3	Detailed design and property-specific agreements to reduce direct impacts on land and, where relevant with respect to impacts on property infrastructure, productivity or management, compensation agreements.	A2
	The proposal may stimulate establishment of businesses or industry precincts which will generate employment, demand for industrial land and/or residential development.	O	+	Councils. Proposal region businesses and communities.	C3	Provide information about the proposal to investors interested in opportunities facilitated by the proposal	C3
<b>Amenity</b>	The proposal's construction is likely to result in impacts on the amenity of residents in North Star through noise, dust and/or increased traffic, with potential for construction noise to cause stress to residents, affect their lifestyle and/or cause sleep disturbance for some residents.	C	-	Landowners, tenants and North Star residents.	A4	Noise mitigation measures recommended in Appendix J: Construction noise and vibration. Early and regular consultation with North Star residents regarding construction noise and refinement of noise mitigation measures as required.	A3
	Some landowners are likely to see the proposal as a significant intrusion on their properties due to severance, noise and/or changes to land use within the rail corridor leading to a loss of its current character. This is particularly so for landowners in the proposal's greenfield section, but landowners near the existing rail corridor are concerned about the impacts of the corridor's intensification.	C/O	-	Directly affected landowners.	B3	Engagement with directly affected landowners to review the detailed design and take inputs into consideration in finalising the design and construction methodologies.	B2

Impact area	Potential impacts	Phase	Nature	Stakeholders affected	Signif.	Proposal-specific measures	Residual Signif.
	Rail noise levels are predicted to exceed noise levels which trigger the investigation of noise mitigations for three houses within 200 m of the rail corridor, with potential for noise to affect quality of life for these residents.	O	-	Landowners and tenants in affected properties.	B3	Acoustic treatment/fencing upgrade measures provided in EIS Chapter 27: Environmental management plan	B2
	Neighbours to properties on which borrow pits would be located may experience noise, dust or increased traffic which could impact on their amenity during construction.	C	-	Nearby neighbours and people living on routes between the proposal and borrow pits.	C3	Agreements between the construction contractor and owners of properties on which borrow pits would be located will include consideration of the amenity of nearby neighbours and traffic safety.	C2
	Rail operation would introduce a noise source for people living near the study area which may be experienced by nearby residents including those in North Star as intrusive, regardless of regulatory compliance.	O	-	Landowners and tenants on properties where noise exceedances may occur.	A3	Noise management measures as detailed in Appendix K: Operational noise and vibration.	A2
<b>Local character</b>	Laydown areas and the accommodation camp are likely to impact on the rural character of North Star, with potential for residents to experience this as detracting from their sense of place or community identity during construction.	C	-	Landowners and North Star community members.	B3	Ongoing engagement with affected landowners and development of property-specific mitigation measures for directly affected landowners.	B2
	The Macintyre River Viaduct would detract from the natural character of the river and its banks in the area of the viaduct crossing and affect community enjoyment of this area.	O	-	Nearby landowners and community members in Toomelah and Boggabilla.	A3	Support for Toomelah community initiatives to offset loss of character and amenity near the Macintyre River Viaduct.	A2

Impact area	Potential impacts	Phase	Nature	Stakeholders affected	Signif.	Proposal-specific measures	Residual Signif.
	The rail corridor and operation of freight trains may affect the peaceful rural character of North Star.	O	-	Toomelah residents and landowners in or near study area. Councils and tourism bodies.	A3	Noise management measures as detailed in Appendix K: Operational noise and vibration. Support for community initiatives to offset loss of character and amenity in North Star.	A2
<b>Connectivity and travel delays</b>	Consolidation of rail crossings will reduce connectivity within and between properties near the study area. The proposal provides the opportunity to upgrade and replace existing level crossings along the existing rail corridor.	C/O	-	Directly affected landowners and nearby community members.	A3	Closure of roads and the design of crossings on private land will be designed in consultation with affected landowners.	A2
	Construction of bridges and level crossings on public roads will require traffic detours and cause delays during the construction period.	C	-	Proposal region community members. Emergency services.	A2	Prior advice to landowners and community members on construction schedule and activities.	A1
	With trains of 1.8 km, travel delays of approximately two minutes per level crossing is anticipated. Trains of 3.6 km in length may result in longer travel delays. Traffic delays have potential to inconvenience road users and cause stress, however traffic impact assessment indicates the level of service on affected roads would remain unchanged.	O	-	Proposal region community members. Emergency services.	A2	Access to information about train schedules provided as part of proposal communications	A1
<b>Access to natural resources</b>	The Toomelah community's access to remnant forest areas along the existing non-operational rail alignment for native vegetation and cultural education of young people will be significantly and permanently disrupted.	C/O	-	Toomelah community Toomelah Boggabilla LALC.	A3	Support for development of community initiatives to offset loss of vegetation and create jobs.	A2

Impact area	Potential impacts	Phase	Nature	Stakeholders affected	Signif.	Proposal-specific measures	Residual Signif.
	Direct impacts on landowners' access to water may include destruction of bores in the proposal footprint, or disruption to water storage and management infrastructure, which may impact on the productivity and ease of management of farms.	C/O	-	Property owners.	A3	ARTC is working with landowners to mitigate impacts on water management infrastructure, which may include re-alignment of water pipelines or dams, or replacement of bores	A2
	Social uses of creeks and the Macintyre River such as fishing and enjoyment of the natural environment will be disrupted in the areas where the bridges and viaduct would be constructed.	C	-	Toomelah and Boggabilla and nearby landowners.	A3	Community and economic development projects involving Toomelah and Boggabilla residents.	A2
	Amenity for fishing and environmental enjoyment of the Macintyre River and Whalan Creek near the viaduct/bridges will be periodically disturbed by rail/train noise.	O	-	Toomelah and Boggabilla communities and landowners.	B3	None available.	B3
<b>Personal and property rights</b>							
<b>Farms and agricultural land</b>	The proposal will require acquisition of agricultural land and has potential to isolate farm infrastructure, reduce stock access, or affect drainage or water management, which may impact on farm productivity or management. Construction of crossings on private land may disrupt on-farm connectivity and property operations.	C/O	-	Directly affected landowners, farming employees, dependent local businesses.	A3	Property-specific agreements addressing loss of land.  Ongoing engagement with affected landowners to develop design for crossings and mitigation of impacts on water management.	A2
<b>Anxiety about property values</b>	Landowners near the study area are anxious that the proposal's land requirements and operation could affect their property values. Land values may be affected by a mix of factors, including perceived or actual environmental impacts or factors unrelated to the proposal.	C/O	-	Landowners in and near the study area.	A3	Construction and operation managed in accordance with EMP and approval conditions  Property-specific agreements addressing loss of land.  Communication with landowners and community members regarding environmental management strategies.	A2



Impact area	Potential impacts	Phase	Nature	Stakeholders affected	Signif.	Proposal-specific measures	Residual Signif.
<b>Concern about flooding</b>	Assessment of the proposal's potential to affect flooding patterns (refer Appendix H: Hydrology and flooding) indicates that there would be no impacts greater than 10 mm predicted on habitable dwellings, and increases in peak water levels at identified non-habitable dwellings are predicted to be less than 50 mm. Due to lack of trust in hydrology modelling, concerns about the proposal's potential to change flooding patterns may still cause stress and anxiety to community members.	C/O	-	Toomelah community Landowners near the study area GRC MPSC GSC	B3	Provide detailed information about the results of flood modelling to residents, Councils and landowners.	B2
<b>Community and Culture</b>							
<b>Toomelah community identity and functions</b>	The Macintyre River Viaduct has the potential to act as a visual barrier which may increase Toomelah's feelings of social isolation. The viaduct will generally only be visible on the drive between Toomelah and Boggabilla and from the Macintyre River and its banks, however the viaduct along with rail noise and loss of remnant vegetation near Toomelah have potential to harm sense of identity as connected to the environment.	C/O	-	Toomelah community Toomelah Boggabilla LALC	A4	Establish a communication and engagement agreement with Toomelah Boggabilla LALC, to refine mitigation measures and identify initiatives to offset impacts on community and cultural identity.	A3
<b>North Star community size and character</b>	The establishment of the construction accommodation camp in North Star would see a temporary population influx, increasing the village's population from approximately 50 people to approximately 400 people at the peak of construction. The location of the construction accommodation camp and laydown areas in North Star is likely to temporarily change the town's character and its identity as a quiet rural community.	C	-	North Star community North Star Sporting Club committee GSC	A3	Early engagement with North Star Primary School, Department of Education, GSC, North Star Sporting Club committee and North Star residents regarding measures to reduce impacts on village character.	B2

Impact area	Potential impacts	Phase	Nature	Stakeholders affected	Signif.	Proposal-specific measures	Residual Signif.
<b>Community cohesion</b>	Proposal-related effects on community cohesion may include loss of connectivity between rural properties and across the rail corridor, and potential for community conflict.	C/O	-	Toomelah and Boggabilla communities, Gomeroi people, and landowners.	B3	Investment in local communities with a focus on programs and services which strengthen local social networks.  Ensure the provision of regular, accessible information about the proposal to community members to support their ability to cope with changes.	B2
<b>Recreation</b>	The accommodation camp would require use of part of the North Star Sporting Club site, interrupting its use for local polo matches, pony club events and trailbike events during construction.	C	-	North Star community members, event participants.	A2	Strategies agreed with user groups to offset impacts of land use for the camp  Legacy opportunities offsetting temporary impacts.	A1
<b>Employment</b>							
<b>Construction employment</b>	Construction will require up to 350 personnel, a proportion of whom would be drawn from the proposal region. The opportunity for up to two years' employment in construction would be a significant benefit for personnel and their families.	C	+	Construction industry businesses, employees and job seekers in proposal region and New England North West Region.	B2	Requirement for construction contractors to advertise positions locally and involve local businesses.	B3
		C	+				
<b>Labour availability</b>	Proposal demand may contribute to shortages in specific trades and labour, particularly in the context of cumulative proposal demands.	C	-	Proposal region business and industries.	B3	Advise Councils and DITRDC of intended construction personnel ramp-up.	B2
<b>Operations employment</b>	A workforce of approximately 15 personnel is anticipated for proposal operation, providing long term skilled employment opportunities.	O	+	Proposal region jobseekers.	A2	Cooperate with local high schools, training and employment organisations to develop pathways to proposal employment for local young people.	A3

Impact area	Potential impacts	Phase	Nature	Stakeholders affected	Signif.	Proposal-specific measures	Residual Signif.
	The proposal would stimulate indirect employment growth through related investments in infrastructure, freight terminals and related businesses.	O	+	Proposal region jobseekers.	B3	N/A.	B3
<b>Impacts of decommission</b>	Decommissioning would result in a temporary increase in employment opportunities, followed by a loss of jobs after decommissioning is complete.	D	+/-	Proposal region business.	C2	Advise Councils and communities of decommissioning in advance.	C1
<b>Business and industry</b>							
<b>Local and regional supply to proposal</b>	Opportunities for local and regional businesses to supply the proposal may include fuel supply, equipment replacement, borrow and quarried material, and services e.g. fencing, rehabilitation, landscaping, cleaning and maintenance, and trades services.	C	+	Proposal region businesses and employees.	B3	Information provided to businesses in the proposal region regarding construction program and business capacity building programs available as part of Inland Rail Skills Academy	B3
<b>Agricultural businesses</b>	Road works which would disrupt farms' connectivity to markets may impact on travel times, however this would be temporary.	C	-	Directly affected landowners and agribusinesses.	C2	Information to landowners in and adjacent to the study area and in nearby communities regarding the roadworks schedule and any anticipated travel delays	C2
	Severance of agricultural lots and/or impacts on the connectivity of properties may impact on the productivity of agricultural businesses, with potential to impact on the availability of employment on farms.	C/O	-	Directly affected landowners and agribusinesses.	C3	Property-specific agreements addressing loss of land. Ongoing engagement with affected landowners to develop design for crossings and mitigation of impacts on water management.	C2
	There is potential for agricultural producers to access freight rail services to transport their produce to market.	O	+	Proposal region landowners and agribusinesses.	C3	N/A.	C3

Impact area	Potential impacts	Phase	Nature	Stakeholders affected	Signif.	Proposal-specific measures	Residual Signif.
<b>Tourism</b>	A temporary change in North Star's attractiveness as a tourism stop may be experienced but the town appears likely to attract ongoing visitation.	C	-	North Star community members, businesses and tourists.	B2	Legacy opportunities offsetting temporary impacts	B1
	North Star Sporting Club and Wobbly Boot Hotel may experience increased trade from non-resident workers.	C	+	Local businesses.	C2	N/A.	C2
	Some diminishment of the rural landscape may be expected where the rail corridor is parallel to Bruxner Way.	O	-	Tourists in the proposal region.	B2	Standard rural fencing, consistent with the rural landscape	B2
<b>Transport and logistics businesses</b>	Transport or logistics businesses located in the proposal region will have significant opportunities to service the construction phase.	O	+	Businesses in the proposal region.	B2	Access to capacity building projects for businesses in the proposal region.	B3
	During operations, there may be a decrease in long haul road freight volumes over time, affecting levels of trade for local transport businesses, however the proposal may also stimulate local freight movement opportunities.	O	-	Businesses in the proposal region.	C3	N/A.	C3
<b>Regional development</b>	Inland Rail benefits include improved freight linkages, improved access to regional market, reduced rail costs, improved reliability and potential to catalyse complementary supply chain investments.	O	+	Businesses in the proposal region. Councils. ARTC. DITCRD.	C3	N/A.	C3
<b>Housing and accommodation</b>							
<b>Accommodation camp</b>	The proposed temporary workforce accommodation camp's potential impacts include demands on limited emergency services and impacts on amenity and use of the North Star Sporting Club's facilities.	C	-	North Star Community, North Star school, North Star Sporting Club.	A3	Provision of security and paramedic staff within camp.  Consideration the results of North Star Sporting Club's consultation with user groups in the location and detailed design of camp.	A2

Impact area	Potential impacts	Phase	Nature	Stakeholders affected	Signif.	Proposal-specific measures	Residual Signif.
	The accommodation camp could leave a positive legacy for the North Star community if facilities or infrastructure constructed for the camp are left in place following construction.	O	+	North Star community, North Star Sporting Club and GSC.	C2	Engage with North Star community, North Star Sporting Club and GSC regarding legacy opportunities.	C3
<b>Access to services and infrastructure</b>							
<b>North Star Primary School</b>	There is potential for noise and dust from the laydown areas to affect the North Star Primary School's learning environment. Parents and school staff may also be concerned about the presence of non-local construction workers near the school.	C	-	North Star Primary School, North Star community, NSW Education.	C4	Early engagement with North Star Primary School, Department of Education, GSC to discuss environmental controls and mitigation measures.	C3
<b>Emergency services capacity</b>	The possible increase in traffic accidents associated with increased workforce traffic, heavy haulage and construction vehicles may increase demand on ambulance and police services. Emergency services capacity may need to be supplemented to address the impacts of the population influx supplemented in North Star. Emergency service vehicles may be delayed at the construction sites for the grade-separated crossings of Bruxner Way and Tucka Tucka Road and at level crossings.	C	-	North Star community. GSC. NSW and Queensland Police, Ambulance and Fire Services.	B3	Extend ARTC's existing protocol with NSW RFS, to include NSW Police, NSW Ambulance, and Queensland counterparts. Employment of security staff for laydown and accommodation sites in North Star.	B2
	Emergency services may be delayed at level crossings, resulting in increased response times	O	-	NSW Police, Ambulance and F&R Services.	B4	Provision of information about train schedules and cross-corridor access to emergency services	B3
<b>Waste management</b>	Waste services and septic treatment infrastructure in North Star would need to be supplemented to meet the demand generated by the construction accommodation camp.	C	-	GSC. North Star community.	A3	Consultation with GSC.	A2

Impact area	Potential impacts	Phase	Nature	Stakeholders affected	Signif.	Proposal-specific measures	Residual Signif.
<b>Health and wellbeing</b>							
<b>Support for community wellbeing</b>	The proposal represents a positive contribution to community wellbeing by increasing employment opportunities for up to 350 construction personnel and approximately 20 operations personnel.	O	+	Proposal region construction personnel jobseekers and families.	A2	N/A.	A2
<b>Mental health</b>	There is potential for stress related to proposal uncertainties (e.g. concern about flooding impacts) to affect the mental health of some people, particularly those who live in proximity to proposal. There is also potential for changes to the environment near Toomelah to contribute to stress or mental illness.	C/O	-	Landowners near the study area. Toomelah community. Toomelah Boggabilla LALC. NSW Health and community agencies/networks	B4	Mental health program delivery (current). Careful, ongoing consultation and provision of appropriately detailed information regarding flood modelling and environmental and cultural heritage impact management.	B3
<b>Toomelah community wellbeing</b>	Toomelah community members hold concerns that children on the autism spectrum in Toomelah who may be affected by construction noise or rail noise.	C/O	-	Toomelah community Toomelah Boggabilla LALC.	B4	Consult with the Toomelah Boggabilla LALC to identify any feasible measures which would reduce noise disturbances for people with autism.	C3
	Proposal-related changes to the landscape around Toomelah may affect residents' feelings of connection to place.	O	-	NSW Health. NSW Police. Community agencies/networks.	B4	Work with the Toomelah community to develop and implement strategies which offset impacts on the landscape and connectivity.	C4
	Potential exists for people to access the rail corridor where it is at grade southwest of Toomelah, increasing the opportunity for rail suicide and risky behaviour.	O	-		B5	Proposal fenced and elevated to be inaccessible from approximately 2.7 km southwest of Toomelah with the abutment located on fenced private land Dedicated community development and employment programs to address causes of mental illness.	C5

Impact area	Potential impacts	Phase	Nature	Stakeholders affected	Signif.	Proposal-specific measures	Residual Signif.
	The proposal has a significant opportunity to improve community wellbeing in Toomelah through employment, business development and community development.	C/O	+	Toomelah community Toomelah Boggabilla LALC.	C3	Communication and Engagement Agreement with Toomelah Boggabilla LALC, Toomelah Elders, and other nominated community leaders to plan community programs.	C4
<b>North Star community wellbeing</b>	The North Star community will experience increased traffic, construction noise and an influx of non-local personnel. This may engender anxiety about traffic safety, health or children's security, and may discourage people from spending time in town.	C	-	North Star community. GSC. NSW Police, Ambulance and Fire and Rescue Services.	B3	Proposed access road to reduce traffic through North Star village and past the school.  Ongoing consultation, advice to community members about workforce conduct policy, and ensuring 24-hour contact with the proposal is enabled.	B2
<b>Rail corridor safety</b>	Safety risks associated with the proposal's operation include derailments, level crossing accidents.	O	-	Proposal region communities. Councils. NSW Police.	C5	Support for road and rail safety awareness programs.  Proposal fenced and elevated from approximately 2.7 km southwest of Toomelah with the abutment located on fenced private land  Protocols with Police and emergency services.	C3
<b>Cumulative impacts</b>							
<b>Local businesses</b>	The expansion in construction activity would support additional flow-on demand and additional spending by the construction workforce.	O	+	Proposal region communities, and businesses.	C2	N/A.	C2



Impact area	Potential impacts	Phase	Nature	Stakeholders affected	Signif.	Proposal-specific measures	Residual Signif.
<b>North Star community impacts</b>	Sequential construction of N2NS and the proposal may result in up to four years' construction activity in the North Star area, with increased heavy traffic, large numbers of non-local workers and impacts on visual amenity. This is likely to affect rural character and to fatigue local residents.	C	-	Proposal region communities. Councils. NSW Police.	B4	Ongoing consultation, advice to community members about workforce conduct policy, and ensuring 24-hour contact with the proposal is enabled.  Support for community and Council initiatives which offset impacts on amenity and character.	B3
<b>Labour supplies</b>	At the regional level, if multiple projects are constructed in the same time frame, there may be a significant draw on trades and construction labour.	C	-	Proposal region communities, famers and businesses.	C3	Cooperate with local high schools, training and employment organisations to develop pathways to proposal employment for local people.	C2

## 10 Conclusions

### 10.1 Distributional equity

Distributional equity refers to the effect of differing impacts across communities, areas and time. As for all major projects located near human settlements, negative impacts are more likely to be experienced by those living closest. The proposal will require extensive construction works, with potential for impacts on directly affected landowners, adjacent landowners, farms, businesses, the Toomelah and North Star communities, and community and government services.

With the exception of North Star which is located 1.5 km north of the proposal's alignment, and would accommodate the construction accommodation camp and laydown areas, the proposal is located in sparsely populated areas, limiting the number of people who would be exposed to construction impacts such as noise or dust, and also limiting the potential for noise exceedances during rail operation.

Landowners' cross-corridor movements and connectivity between properties on either side of the rail corridor would be affected during both construction and operation. ARTC has consulted with landowners in developing the design for level crossings to reduce impacts on cross-corridor connectivity. The change to land use in the greenfield section – from agricultural to rail infrastructure – and intensification of the rail corridor in the brownfield section have potential to affect the rural character in and adjacent to the study area.

Construction works would cause temporary delays which would affect landowners and other motorists, however with the exception of short travel delays at level crossings, long term impacts on the road network are not anticipated.

At the proposal's southern extent, North Star would experience impacts on local amenity and character related to the location of the construction accommodation camp and laydown area, and potential for increases in traffic and/or noise related to the cumulative effects of the proposal and the N2NS project. There is also potential for ARTC to leave a positive legacy in North Star.

At the northern extent, the proposal is likely to have social impacts on Toomelah, including changes to the Macintyre River's natural environment, potential for challenges to community identity and community concerns about safety. The rail corridor would be situated approximately 2 km from Toomelah, reducing the potential for impacts such as noise, dust or changes to the character of the community. As Toomelah residents currently experience extreme disadvantage, they are more vulnerable to social impacts, and to potential self-harm and high-risk behaviour in relation to the rail line. The proposal includes design measures which will mitigate the risk of Toomelah residents accessing the corridor. ARTC will work with the Toomelah Boggabilla LALC and local communities to initiate community and economic development projects to reduce this risk.

There is also potential for Toomelah to obtain benefits from employment or business supply to the proposal, and longer-term benefits from partnerships with ARTC.

In terms of broader regional benefits, the proposal's local supply arrangements will be experienced as an opportunity to develop and grow businesses in the proposal region.

In relation to distribution of impacts over time, directly affected and nearby landowners will experience the most significant impacts, in that cross-corridor connectivity would be reduced by the rail corridor and residents living near the rail corridor may experience rail noise as impacting on their amenity, regardless of compliance with noise criteria. Landowners are likely to have access to opportunities to transport their produce using the rail corridor, which may offset any impacts on the management of agricultural properties.

ARTC will respond to any complaints about rail noise or vibration which residents report is affecting their quality of life, including investigation of noise levels in any sections of the track which are identified as problematic, and consideration of mitigation measures (such as specific track maintenance activities) which could reduce noise levels.

The proposal is part of the Inland Rail Programme, which will make a strong contribution to regional, state and national development for up to 100 years.

## 10.2 Residual risks

Residual risks are identified in Table 72. The assessment shows that the residual impacts over the life of the proposal are considered to range from minor to extreme after the effective implementation of management and mitigation strategies.

Residual risks which are almost certain or likely, and of moderate or high consequence, include:

- Impacts of the bridge crossing on the natural character and amenity of the Macintyre River and its banks, and loss of native vegetation, which may affect residents' sense of place or Aboriginal cultural identity, with potential to affect both current and future generations. This will be addressed through an early, cooperative community and economic development program with the Toomelah community, including consideration of placemaking in relation to the viaduct spanning Tucka Tucka Road and the Macintyre River
- Impacts on the rural character of North Star during the construction period, which would be addressed through working with the GSC and the North Star community to manage impacts such as noise and increased traffic, and achieve positive long-term social outcomes
- Impacts on the amenity of people living near the proposal, through noise, dust, and/or increased traffic during construction, particularly in North Star, which would be addressed by working closely with directly affected landowners and the North Star community to mitigate their specific concerns
- Potential for noise and dust from the laydown areas to affect the North Star Primary School's learning environment, which would be addressed in consultation with the Department of Education and the school, with relocation of the school's primary access point from North Star Road to David Street, likely to improve safety of access to the school for the longer term
- Emergency services may be delayed at level crossings during operations, resulting in increased response times, which would be addressed by enabling access to information on the schedule for train movements to help emergency service vehicle operators to navigate access arrangements
- Potential for stress related to proposal uncertainties (e.g. timing or potential flooding impacts) or changes to the environment to affect the mental health of people who live in proximity to the proposal, which is being addressed through provision of a mental health partnership to enable local access to mental health services

- Safety risks associated with the proposal's operation include derailments, level crossing accidents, and railway-based suicide. Level crossings will be provided with warning signage, line marking, and other relevant controls, in accordance with the relevant national and ARTC standards. ARTC will also develop a safety education program which has a clear focus on interactions between the rail corridor, roads and other access tracks, interactions with rural roads and rural traffic

One extreme risk exists in that it will be possible for people to access the rail corridor, increasing the opportunity for rail suicide and risky behaviour which may lead to accidental death, which is of particular concern in the disadvantaged community of Toomelah which is located approximately 2 km from the study area. Proposal design measures which will reduce the risk of suicide include:

- The rail line would be elevated from Ch 29.4 km and the rail-over-road structure at Tucka Tucka Road would be inaccessible providing mitigation of the risk of people entering the corridor
- The nearest abutment (connection to the rail corridor at ground level) is located on private land, and out of sight of the Toomelah community
- The rail corridor and private land boundaries will all be fenced.

A second risk which was identified as extreme is that the Macintyre River Viaduct has the potential to act as a visual barrier which may increase Toomelah's feelings of social isolation. The viaduct will generally only be visible on the drive between Toomelah and Boggabilla and from the Macintyre River and its banks, however the viaduct along with rail noise and loss of remnant vegetation near Toomelah have potential to harm sense of identity as connected to the environment. This may add to the stresses that the Toomelah community has already experienced in maintaining cultural identity, and there is potential for this to affect both current and future generations

ARTC will work with the Toomelah Boggabilla LALC and the Toomelah community to develop strategies to offset impacts on the landscape and its amenity near the viaduct.

ARTC will also support Toomelah community initiatives to mitigate loss of access to native vegetation in the non-operational rail corridor, such as re-establishment of species affected. This will be addressed as part of a package of mitigation strategies to be developed with the Toomelah community.

### 10.3 Proposal benefits

Proposal benefits which are almost certain or likely, and of moderate or high consequence, include:

- Construction will require up to 350 personnel, of whom some would be drawn from the proposal region. The opportunity for employment in proposal construction would be a significant benefit for personnel and their families
- There is potential for the North Star store to be re-opened which would provide a benefit to local residents
- Long term skilled employment opportunities for operational personnel
- Stimulation of indirect employment growth through related investments in infrastructure, freight terminals and related businesses
- Opportunities for local/regional supply to the proposal supporting business vitality and employment.

ARTC's strategies for maximising the benefits of the proposal to local and regional communities include:

- Working with community members to identify how the proposal could contribute to enhancement of community values and quality of life
- Working with nearby communities, including Toomelah and Boggabilla, to facilitate access to employment opportunities

- Identifying local and Aboriginal businesses who could contribute to the supply chain and working with them to explore opportunities to mitigate or offset impacts on their businesses
- Inland Rail Skills Academy, which will skill residents within the proposal region, and leave a lasting legacy of increased workforce skills that could be applied to other infrastructure projects and industries.

### **Assessor's details**

This report was prepared by Dee Elliott, Director of Elliott Whiteing Pty. Ltd. Dee holds the degrees of Bachelor of Arts (Behavioural Sciences) and Master of Social Policy and has 30 years' professional experience in social impact assessment and management.

The assessment was undertaken during April 2018 – August 2019, based on the information available at the time. It contains all information relevant to the SIA for the Project, and to my knowledge does not contain information that is false or misleading.



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## 11 References

- ABC Australia 29 May 2012. Child abuse, violence plague Toomelah despite funding. 7.30 Report. Television.
- ABS 2016. Census of Population and Housing – Goondiwindi, Moree Plains and Gwydir LGAs, North Star, Boggabilla, Goondiwindi, Boonal State Suburbs, Toomelah Locality, New England and North West SA4, New South Wales STE. Accessed at <https://www.abs.gov.au/websitedbs/D3310114.nsf/Home/2016%20Census%20Community%20Profiles%20throughout%20June%202018-2019>
- ABS 2016b. 2940.0 - Census of Population and Housing: Details of Overcount and Undercount, Australia, 2016 <<http://www.abs.gov.au/ausstats/abs@.nsf/mf/2940.0> on 3 September 2018>
- ABS 2018. Accessibility and Remoteness Index. Accessed at: <http://www.abs.gov.au/websitedbs/D3310114.nsf/home/remoteness+structure> on 1 September 2018
- ABS 2016c,. Census of Population and Housing: Estimating homelessness 2011, 2016 Accessed at <http://www.abs.gov.au/ausstats/abs@.nsf/mf/2049.0> on 8 September 2018
- ABS 2016d. Labour Force Survey 2018, 12 month average Accessed at <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/6202.0August%202018?OpenDocument> on 8 October 2018
- ABS 2016e. Tourist Accommodation, Australia, QLD and NSW by SA2, 2015-2016 Accessed at <http://www.abs.gov.au/ausstats/abs@.nsf/mf/8635.0/> on 9 November 2018
- Adhikari P, 2006. Socio-Economic Indexes for Areas: Introduction, use and plans for 2006. ABS. Census Analysis Conference 2006. July. Canberra Australia.
- Altman JC, Jordan K. 2009,. The untimely abolition of the Community Development Employment Program. Submission to Senate Community Affairs Committee Inquiry not the Family Assistance and Other Legislation Amendment (2008 Budget and Other Measures) Bill 2008. CAEPR Topical Issues No. 05/2009. Centre for Aboriginal Economic Policy Research. Australian National University. Canberra. Accessed at <https://caepr.cass.anu.edu.au/research/publications/untimely-abolition-community-development-employment-program-abolition-cdep> on 18 September 2018
- ANROWS, undated. Australia's National Research Organisation for Women's Safety Limited. Fact Sheet accessed at <https://www.anrows.org.au/publications/fast-facts-0> on 18 September 2018
- ARTC 2018. North Star to NSW/Qld Border Project Study Area Selection Report . Accessed at [https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/417f457e38e5e95afb48ff963fb1a33ccb7c4816/documents/attachments/000/078/731/original/NSW\\_NS2BStudyAreaSelectionReport\\_0518.pdf?1527472858](https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/417f457e38e5e95afb48ff963fb1a33ccb7c4816/documents/attachments/000/078/731/original/NSW_NS2BStudyAreaSelectionReport_0518.pdf?1527472858) on 1 September 2018
- ARTC 2018. Significant Infrastructure Scoping Report. Provided by ARTC
- Australian Government Department of Jobs and Small Business, Small Area Labour Markets – June quarter 2018. Accessed at <<https://docs.jobs.gov.au/documents/small-area-labour-markets-june-quarter-2018>> on 27 September 2018
- Australian Industry Group and Australian Constructors Association 2018. Construction Outlook Survey, Accessed at <https://www.aigroup.com.au/policy-and-research/economics/constructionoutlook> on 20 October 2019
- Australian Transport Safety Bureau 2012. ATSB Transport Safety Report. RR-2012-010 Final. Australian Rail Safety Occurrence Data. 1 July to 30 June 2012. Australian Government. Accessed at <https://www.atsb.gov.au/publications/2012/rr-2012-010/> on 1 September 2018

Calma T, Dudgeon P, Bray A. 2017. Aboriginal and Torres Strait Islander Social and Emotional Wellbeing and Mental Health. *Australian Psychologist*. 52. (2017) 255-260. Accessed at <https://aps.onlinelibrary.wiley.com/doi/full/10.1111/ap.12299> on 20 September 2018

National Aboriginal Community Controlled Health Organisation 2018. Accessed at <https://www.naccho.org.au/about/aboriginal-health/definitions/> on 20 September 2018

Career Network 2018. Regional Career Pathways Accessed at <https://www.careersnetwork.org.au/regional-career-pathways.php> on 21 September 2018

Centre for Road Safety 2017. Road Trauma Amongst Aboriginal and Torres Strait Islander People in NSW 2005-15, Statistical Profile. Transport for NSW. NSW Government.

COAG 2016. COAG Advisory Panel on Reducing Violence against Women and their Children. Final Report. Department of the Prime Minister and Cabinet. Commonwealth of Australia. Canberra. Accessed at <https://www.coag.gov.au/sites/default/files/communique/COAGAdvisoryPanelonReducingViolenceagainstWomenandtheirChildren-FinalReport.pdf> on 15 September 2018

Cross-Border Commissioner Protocol, undated, Accessed at: <https://www.dpc.nsw.gov.au/programmes-and-services/protocol/> on 21 September 2018  
Department of Health website. Australian Government, Accessed at <http://www.health.gov.au/internet/main/publishing.nsf/content/chronic-disease> on 21 September 2018

De Wit, Cary 2012. *Journal of Cultural Geography*, Vol. 30, No. 1. To hand, available from <https://www.tandfonline.com/action/doSearch?AllField=de+wit&SeriesKey=rjcg20>

Domain 2018. Residential sales listings, September 2018, Accessed at <https://www.domain.com.au/sale/boggabilla-nsw-2409/> on 19 November 2018

Department of Health and Ageing 2013. National Aboriginal and Torres Strait Islander Suicide Prevention Strategy. Australian Government, Canberra. Accessed at: <http://www.health.gov.au/internet/main/publishing.nsf/Content/mental-pub-atsi-suicide-prevention-strategy> on 15 September 2018

Department of Employment Skills Family and Small Business 2018. Occupational Skills Shortages, Accessed at: <https://www.employment.gov.au/occupational-skill-shortages-information> on 4 March 2019

Department of Planning and Environment 2017. Social Impact Assessment Guideline for State significant mining, petroleum production and extractive industry development and SIA Scoping Tool. Accessed at <https://www.planning.nsw.gov.au/Policy-and-Legislation/Under-review-and-new-Policy-and-Legislation/Social-Impact-Assessment> 12 March 2018

Department of Planning and Environment 2013. Infrastructure proposals on Rural Land Primefact 1063, second edition. Accessed at [https://www.dpi.nsw.gov.au/\\_\\_data/assets/pdf\\_file/0020/359030/infrastructure-proposals-on-rural-land.pdf](https://www.dpi.nsw.gov.au/__data/assets/pdf_file/0020/359030/infrastructure-proposals-on-rural-land.pdf) on 20 March 2018

Department of Planning and Environment 2017. New England North West Regional Plan 2036. Accessed at <https://www.planning.nsw.gov.au/Plans-for-your-area/Regional-Plans/New-England-North-West> on 5 May 2018

Department of the Prime Minister and Cabinet 2017. Aboriginal and Torres Strait Islander Health Performance Framework 2014 Report. Canberra. Accessed at [https://www1.health.gov.au/internet/main/publishing.nsf/Content/oatsih\\_health-performanceframework](https://www1.health.gov.au/internet/main/publishing.nsf/Content/oatsih_health-performanceframework) on 20 October 2018



Domain Rental Listings September 2018. Accessed at <https://www.domain.com.au/rent/goondiwindi-qld-4390/> on 30 September 2018

Elliott, P. 2008, Property values and infrastructure provision: A conceptual model of risk perception, amplification and worsenment. *Nordic Journal of Surveying and Real Estate Research, Special Series*, Vol. 3 2008. Accessed at [https://www.researchgate.net/publication/43505422\\_Property\\_values\\_and\\_infrastructure\\_provision\\_A\\_conceptual\\_model\\_of\\_risk\\_perception\\_amplification\\_and\\_worsenment](https://www.researchgate.net/publication/43505422_Property_values_and_infrastructure_provision_A_conceptual_model_of_risk_perception_amplification_and_worsenment) on 6 April 2018

Hometrack Housing Valuation System 2017. Goondiwindi Regional Council Accessed at <https://economy.id.com.au/goondiwindi/housing-prices> on 30 September 2018

Htag 2018, Houses in Gwydir Shire Council 2018, Accessed at <https://www.htag.com.au/nsw259-gwydir-shire-council-houses/> on 6 April 2018

Justice Marcus Enfield /Human Rights Australia 1988. Toomelah Report, June 1988, Accessed at <https://www.humanrights.gov.au/sites/default/files/document/publication/Toomelah.pdf> on 6 April 2018

IFC World Bank Group 2013. Good Practice Handbook on Cumulative Impact Assessment and Management: Guidance For The Private Sector In Emerging Markets Accessed at [https://www.ifc.org/wps/wcm/connect/topics\\_ext\\_content/ifc\\_external\\_corporate\\_site/sustainability-at-ifc/publications/publications\\_handbook\\_cumulativeimpactassessment](https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/publications/publications_handbook_cumulativeimpactassessment) on 30 September 2018

National Institute of Economic and Industry Research (NIER) 2016. Goondiwindi Regional Council: Gross Regional Product Accessed at <https://economy.id.com.au/goondiwindi/gross-product> on 7 November 2018

NSW Department of Industry 2018. Training Services NSW, Department of Industry, Agskilled Training Strategy Accessed at [https://www.training.nsw.gov.au/programmes\\_services/funded\\_other/agskilled/index.html](https://www.training.nsw.gov.au/programmes_services/funded_other/agskilled/index.html) on 7 July 2019

NSW DPI 2011. Resource Planning and Development Unit, Land Use Conflict Risk Assessment Guide Accessed at [https://www.dpi.nsw.gov.au/\\_\\_data/assets/pdf\\_file/0018/412551/Land-use-conflict-risk-assessment-LUCRA-guide.pdf](https://www.dpi.nsw.gov.au/__data/assets/pdf_file/0018/412551/Land-use-conflict-risk-assessment-LUCRA-guide.pdf) on 13 June 2018>.

NSW Government 2018. Floodplain Management Plan for the Border Rivers Valley Floodplain 2018, Accessed at [https://www.industry.nsw.gov.au/\\_\\_data/assets/pdf\\_file/0010/146296/Draft-Floodplain-Management-Plan-for-the-Border-Rivers-Valley-Floodplain-2018.pdf](https://www.industry.nsw.gov.au/__data/assets/pdf_file/0010/146296/Draft-Floodplain-Management-Plan-for-the-Border-Rivers-Valley-Floodplain-2018.pdf) , 07 July 2020

NSW Planning and Environment 2016. NSW Government population projections – Main Series Accessed at <https://www.planning.nsw.gov.au/Research-and-Demography/Demography/Population-projections> on 13 June 2018

NSW RMS 2013. Environmental Planning and Impact Assessment Practice Note: Socio-economic Assessment. To hand.

Graham C 2012. Why Toomelah Collapsed – New Matilda. Accessed at <https://newmatilda.com/2012/07/06/why-toomelah-collapsed/> on 4 July 2019

Human Rights Australia 1988. Toomelah Report. Report on the Problems and Needs of Aborigines Living on the New South Wales – Queensland Border. Human Rights and Equal Opportunities Commissions. June 1988. To hand.

Hunter E, Milroy H . 2006. cited in: Increasing Indigenous self-harm and suicide in the Kimberley: an audit of the 2005–2014 data. Catherine McHugh, Anita Campbell, Murray Chapman and Sivasankaran Balaratnasingam Med J Aust 2016; 205 (1): 33. Accessed at: <https://www.mja.com.au/journal/2016/205/1/increasing-indigenous-self-harm-and-suicide-kimberley-audit-2005-2014-data#5> on 12 September 2018

McGrady G, Peckham M, Grogan G, Butorac A, Cox A, Dudgeon P, Swift S. 2013. The National Empowerment Project. Toomelah. University of Western Australia. Perth. Accessed at <https://www.nationalempowermentproject.org.au/about-toomelah> on 12 September 2018

Mental Health Australia and KPMG 2018. Investing to Save. The Economic Benefits to Australia of Investment in Mental Health Reform. Final Report. May 2018. Mental Health Australia. Accessed at [https://mhaustralia.org/sites/default/files/docs/investing\\_to\\_save\\_may\\_2018\\_-\\_kpmg\\_mental\\_health\\_australia.pdf](https://mhaustralia.org/sites/default/files/docs/investing_to_save_may_2018_-_kpmg_mental_health_australia.pdf) on 12 September 2018

Mental Health Council Australia 2014. Submission to the Senate Inquiry into Affordable Housing. Accessed at: <https://mhaustralia.org/submission/mental-health-australia-submission-senate-inquiry-extent-income-inequality-australia> on 17 September 2018

National Aboriginal Community Controlled Health Organisation website. Accessed at <https://www.naccho.org.au/about/aboriginal-health/definitions/> on 17 September 2018

NSW Environment Protection Authority 2018. Non-road diesel and marine emissions. Accessed at <https://www.epa.nsw.gov.au/your-environment/air/non-road-diesel-marine-emissions> on 1 September 2018

NSW Recorded Crime Statistics July 2017 to June 2018. Accessed at: [https://www.bocsar.nsw.gov.au/Pages/bocsar\\_crime\\_stats/bocsar\\_crime\\_stats.aspx](https://www.bocsar.nsw.gov.au/Pages/bocsar_crime_stats/bocsar_crime_stats.aspx) on 17 September 2018

Office of the National Rail Safety Regulator 2018. Rail Safety Report 2016-2017. Accessed at: [https://www.onrsr.com.au/\\_\\_data/assets/pdf\\_file/0012/20514/Rail-Safety-Report-2016-2017-web.pdf](https://www.onrsr.com.au/__data/assets/pdf_file/0012/20514/Rail-Safety-Report-2016-2017-web.pdf) on 17 September 2018

PHIDU, 2018a. Social Health Atlas of Australia: Population Health Areas. Torrens University Australia. Adelaide. Accessed at <http://phidu.torrens.edu.au/social-health-atlases/data#social-health-atlas-of-australia-population-health-areas> on 11 September 2018

PHIDU 2018b. Aboriginal & Torres Strait Islander Social Health Atlas of Australia. Torrens University Australia. Adelaide. Accessed at <http://phidu.torrens.edu.au/social-health-atlases/data#aboriginal-torres-strait-islander-social-health-atlas-of-australia> on 11 September 2018

PHIDU 2018c. Social Health Atlas of Australia: Notes on the Data. Accessed at: <http://phidu.torrens.edu.au/notes-on-the-data/atsi-notes/irseo> .

Queensland Government 2017. The burden of disease and injury in Queensland's Aboriginal and Torres Strait Islander people (reference year 2011). Accessed at [https://www.health.qld.gov.au/\\_\\_data/assets/pdf\\_file/0024/660840/BoD-MainReport-FINAL.pdf](https://www.health.qld.gov.au/__data/assets/pdf_file/0024/660840/BoD-MainReport-FINAL.pdf) on 11 September 2018

Queensland Health: McKiernan S, Young A, Copeland K, 2005. Health, Wellbeing and the Urban Environment – A Summary of Known Relationships, Statewide Health Services Planning, Queensland Health, Brisbane. To hand.

QLD Government Statistician's Office 2015. Population Projections, 2015 edition (medium series) Accessed at <<http://www.qgso.qld.gov.au/subjects/demography/population-projections/tables/proj-pop-medium-series-age-group-sex-sa2-qld/index.php>> on 12 June 2018

Rail Safety and Standards Board. 2016. Air and health impacts of diesel emissions (S230) Version:5. Knowledge Analysis. Accessed at <https://www.rssb.co.uk/Library/improving-industry-performance/2016-02-health-air-and-health-impacts-of-diesel-emission.pdf> on 1 September 2018

RDA Northern Inland NSW, 2016. Moree Plains Local Government Area, Accessed at <http://www.rdani.org.au/files/pages/projects/northern-inland-regional-investment-profile/RDA164-Moree-Module-LR.pdf> on 1 June 2018

SQM Research 2018. Weekly Asking Prices Index, (based on asking price ) Accessed at <http://sqmresearch.com.au/asking-property-prices.php?t=1> on 25 September 2018

SQM Research 2018. Weekly Rents Index (Median Weekly Reported Rent), September 2018, <<http://sqmresearch.com.au/weekly-rents.php?t=1>> on 25 September 2018

Stiegler, L.N and David, R. 2010. Understanding sound sensitivity in individuals with autism spectrum disorders. Focus on Autism, and other Developmental Disabilities, 23(2) 67 – 75. Accessed at <https://doi.org.10.1177/10883576102364530> on 25 September 2018

Transport for NSW 2018. Crash and casualty statistics, Accessed at <http://roadsafety.transport.nsw.gov.au/statistics/interactivecrashstats/nsw.html?tabnsw=3> on 20 October 2018

Taton S, Kaspiw R, Moore S, Campo M (undated). Groups and communities at risk of domestic and family violence. A review of and evaluation of domestic and family violence prevention and early intervention services focusing on at-risk groups and communities. Australian Institute of Family Studies. Accessed at <https://aifs.gov.au/cfca/pacra/groups-and-communities-risk-domestic-and-family-violence> on 8 September 2018

Thomson, N., et al. 2012. Overview of Indigenous Health Status, 2011. Perth: Australian Indigenous HealthInfoNet, cited in McGrady G, Peckham M, Grogan G, Butorac A, Cox A, Dudgeon P, Swift S (2013). The National Empowerment Project. Toomelah. University of Western Australia. Perth.

World Health Organization 2000. Women and Mental Health: An Evidence Based Review, World Health Organisation, Geneva. Accessed at [http://www.who.int/mental\\_health/publications/women\\_mh\\_evidence\\_review/en/](http://www.who.int/mental_health/publications/women_mh_evidence_review/en/) on 20 September 2018

# APPENDIX



# 0

## Social Impact Assessment Technical Report

### Annex A

### Review Questions

NORTH STAR TO NSW/QUEENSLAND BORDER ENVIRONMENTAL IMPACT STATEMENT

ARTC

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

## Annex A - Review Questions

SIA Review Questions	SIA Section
1. Has the applicant applied the principles in Section 1.3? How?	Action oriented – Section 8 Adaptive – Section 8 Distributive equity – Section 10 Impartial – Throughout Inclusive – Section 6 Integrated – Section 7.1, 7.7 Lifecycle focus – Sections 7 and 9 Material – Sections 4.4 and 9 Precautionary – N/A Proportionate – Sections 8 and 9 Rigorous – Section 3 Transparent – Section 6.
2. Does the lead author of the Scoping report meet the qualification and skill requirements in Box 2?	Not applicable.
3. Does the lead author of the SIA component of the EIS meet the qualification and skill requirements in Box 4?	Refer Section 10.
4. Has the lead author of the SIA component of the EIS provided a signed declaration certifying that the assessment does not contain false or misleading information?	Refer Section 10.
5. Does the SIA include adequate explanations of how the engagement objectives have been applied? How? 6. Does the SIA demonstrate that there has been a genuine attempt to identify and engage with a wide range of people, to inform them about the project, its implications and to invite their input? How? 7. Does the SIA demonstrate that an appropriate range of engagement techniques have been used to ensure inclusivity and to ensure the participation of vulnerable or marginalised groups? How?	Section 6 details engagement objectives, process and outcomes.
8. Does the Scoping Report identify and describe all the different social groups that may be affected by the project?	A Scoping Report was not required prior to the issue of the SEARS. Section 4.4 outlines: <ul style="list-style-type: none"> <li>■ stakeholder inputs to the scope of the SIA</li> <li>■ key matters and impacts considered</li> <li>■ areas of social influence</li> <li>■ potential impacts</li> <li>■ potentially material impacts</li> <li>■ links to EIS findings</li> <li>■ focus for SIA investigations.</li> </ul>
9. Does the Scoping Report identify and describe all the built or natural features located on or near the project site or in the surrounding region that have been identified as having social value or importance?	Section 7.1.4 describes natural features of social value.
10. Does the Scoping Report identify and describe current and expected social trends or social change processes being experienced by communities near the project site and within the surrounding region?	Current and expected social trends or social change processes noted in Section 5.



SIA Review Questions	SIA Section
11. Does the Scoping Report impartially describe the history of the Projected project, and how communities near the project?	Refer Section 4.2.
12. Does the Scoping Report adequately describe and categorise the social impacts (negative and positive), and explain the supporting rationale, assumptions and evidence for those categories?	Section 4.4.5 identifies the potential for material impacts referring to the potential extent, duration of impacts, and scale and the sensitivities of the social environment.
13. How has feedback from potentially affected people and other interested parties been considered in determining those categories? Does the Scoping Report outline how they will be engaged to inform the preparation of the SIA component of the EIS?	Stakeholders were engaged in identifying the potential scope of impacts and benefits (refer Section 6).
14. Does the Scoping Report identify potential cumulative social impacts?	Refer Section 7.9.
15. Does the SIA component of the EIS discuss the local and regional context in sufficient detail to demonstrate a reasonable understanding of current social trends, concerns and aspirations?	Refer Section 5.
16. Does the SIA component of the EIS include appropriate justification for each element in the social baseline study, and provide evidence that the elements reflect the full diversity of views and potential experiences in the affected community?	Section 4.4.5 identifies potentially material impacts. Section 6 describes stakeholder engagement. Section 7 refers to stakeholder inputs in assessing social impacts
17. Does the social baseline study include an appropriate mix of quantitative and qualitative analysis, and explain data gaps and limitations?	Refer Section 3.6 and Section 5.
18. Does the SIA component of the EIS include an appropriate description of the potential impacts in terms of the nature and severity of the change and the location, number, sensitivity and vulnerability of the affected stakeholders?	Refer Sections 7 and 9.
19. Does the SIA component of the EIS identify potential impacts at all stages of the project life cycle?	Refer Section 7 and 9.
20. Does the SIA component of the EIS appropriately identify and justify any assumptions that have been made in relation to its predictions?	Refer Section 7.
21. Does the SIA component of the EIS include appropriate sensitivity analysis and multiple scenarios to allow for uncertainty and unforeseen consequences? If relevant, does it include comparisons with studies of similar projects elsewhere?	Uncertainties addressed in adaptive management measures (Section 8).
22. Does the SIA component of the EIS explain how impacts were evaluated and prioritised in terms of significance?	Refer Section 9.
23. Does the evaluation of significance consider cumulative aspects where relevant?	Refer Sections 7.9 and 9.
24. Does the evaluation of significance consider the potentially uneven experience of impacts by different people and groups, especially vulnerable groups?	Refer Section 9 and 10.
25. Does the SIA identify appropriate measures to avoid, reduce, or otherwise mitigate any significant negative impacts of the project, and justify these measures?	Refer Section 8.
26. Does the SIA explain and justify measures to secure and/or enhance positive social impacts?	Refer Section 8.

SIA Review Questions	SIA Section
<b>27. Does the SIA component of the EIS impartially assess the acceptability, likelihood and significance of residual social impacts?</b>	Refer Section 9
<b>28. Does the SIA component of the EIS propose an effective monitoring and management framework?</b>	Refer Section 8.7