

CHAPTER

23

INLAND
RAIL 

Socio-economic impact assessment

NORTH STAR TO NSW/QUEENSLAND BORDER ENVIRONMENTAL IMPACT STATEMENT

 ARTC

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23. Socio-economic impact assessment

23.1 Introduction

23.1.1 Scope of chapter

This chapter integrates the results of social and economic impact assessment undertaken for the North Star to NSW/Queensland Border (NS2B) Inland Rail project (the proposal). The Social Impact Assessment (SIA) is provided as Appendix O: Social Impact Assessment, and the Economic Impact Assessment (EIA) as Appendix I: Economic Assessment.

23.1.1.1 Social impact assessment

The purpose of the SIA is to identify how the proposal may affect stakeholders and communities. Assessment of social impacts and opportunities included:

- ▶ Identifying potentially affected stakeholders and communities, having regard to all potential social impacts throughout the proposal's life
- ▶ Enabling stakeholders to provide inputs to the SIA, including the scope, social impacts and mitigations
- ▶ Developing a baseline of social characteristics against which potential changes were assessed
- ▶ Providing a detailed assessment of likely social impacts and benefits
- ▶ Describing the actions ARTC will undertake to avoid or reduce social impacts and enhance social benefits
- ▶ Providing a Social Impact Management Plan (SIMP) and monitoring strategy to support adaptive management of social impacts and benefits.

23.1.1.2 Economic impact assessment

The purpose of the EIA is to identify and assess the proposal's potential economic impacts. Assessment of economic impacts included:

- ▶ Establishing the existing economic environment for the defined economic catchment area, to understand the economic context and form the basis to measure change or impacts and their materiality
- ▶ Identifying potential economic benefits and impacts on affected communities and businesses
- ▶ Assessing the projected economic costs and benefits of the proposal, including the basis for their estimation through cost-benefit analysis
- ▶ Assessing the economic significance of the proposal on the local and regional economy, the state and the national economy
- ▶ Proposing measures to enhance economic benefits and to avoid, mitigate or manage impacts.

23.1.2 Secretary's Environmental Assessment Requirements

This chapter has been prepared to address the SEARs as shown in Table 23.1.

TABLE 23.1 SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS COMPLIANCE

Item 15: Socio-economic, Land Use and Property	
Desired performance outcome	The project minimises adverse social and economic impacts and capitalises on opportunities potentially available to affected communities. 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.
Current guidelines	<ul style="list-style-type: none">▶ <i>Environmental Planning and Impact Assessment Practice Note: Socio-economic Assessment</i> (RMS, 2013)▶ <i>SIA Guideline for State Significant Mining, Petroleum Production and Extractive Industry Development</i> (DPE, 2017)▶ <i>Social Impact Assessment Scoping Tool</i> (DPE, 2017)▶ <i>Infrastructure Proposals on Rural Land Primefact 1063</i>, second edition (DPI, 2013)▶ <i>NSW Invasive Species Plan 2018–2021</i> (DPI, 2018)▶ <i>Land Use Conflict Risk Assessment (LUCRA) Guide</i> (DPI, 2011)▶ <i>New England North West Regional Plan 2036</i> (DPE, 2017)

SEARs requirement	EIS section
<p>Item 16.1</p> <p>The Proponent must assess social and economic impacts in accordance with the current guidelines.</p>	<p>Chapter 23: Socio-economic Impacts</p> <p>Appendix O: Social Impact Assessment Technical Report and Appendix I: Economic Assessment Technical Report</p>
<p>Item 16.2</p> <p>The Proponent must assess agricultural land use including:</p>	<p>Chapter 22: Land Use and Property</p>
<p>a) current and potential Important Agricultural Land within the proposal and surrounding locality, including land capability and agricultural productivity;</p>	<p>Section 22.5.4.1, Section 22.5.5.1, Section 22.6.2.1 and Section 22.7.2.1</p> <p>Section 7.2 in Appendix O: Social Impact Assessment</p>
<p>b) division or fragmentation of property and changes to property management which could lead to the loss of viability;</p>	<p>Section 22.6.2.1 and Section 22.7.2.1</p> <p>Section 7.2 in Appendix O: Social Impact Assessment</p>
<p>c) property access and the efficient and safe crossing of the rail corridor by machinery and livestock</p>	<p>Section 22.6.2.1, Section 22.6.3, Section 22.7.2.2 and Section 22.7.3</p> <p>Section 7.2 in Appendix O: Social Impact Assessment</p>
<p>d) connectivity of property infrastructure severed by the rail corridor; and</p>	<p>Section 22.6.2.1, Section 22.6.4, Section 22.7.3, and Section 22.7.4</p> <p>Section 7.2 in Appendix O: Social Impact Assessment</p>
<p>e) livestock exclusion/management to minimise harm and losses.</p>	<p>Section 22.6.2.1 and Section 22.7.2.1</p> <p>Section 7.2 in Appendix O: Social Impact Assessment</p>
<p>Item 16.3</p> <p>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 proposal alignment, in accordance with the 'general biosecurity duty' under the Biosecurity Act 2015.</p>	<p>Section 22.7.2.1</p>
<p>Item 16.4</p> <p>The Proponent must assess the social and economic impact of temporary accommodation for construction workers (construction camps) on communities near the proposal site.</p>	<p>Section 23.5.1</p>
<p>Item 16.5</p> <p>The Proponent must assess impacts from construction and operation on potentially affected properties, businesses, recreational users and land and water users (for example, recreational and commercial fishers, including property acquisitions/adjustments, access, amenity and relevant statutory rights).</p>	<p>Section 0</p>
<p>Item 16.6</p> <p>Where the proposal may impact on significant mineral resources, the Proponent must assess the impact of the proposal on these resources including:</p>	
<p>a) any operating mines, extractive industries or known mineral or petroleum resources;</p>	<p>Section 22.5.4.4</p>
<p>b) exploration activities in the vicinity of the proposed development; and</p>	<p>Section 22.5.4.4</p>
<p>c) access for future exploration in the area.</p>	<p>Section 22.6.5</p>
<p>Item 16.7</p> <p>The Proponent must identify encroachments into adjoining road reserves, travelling stock routes and Crown land and roads affected by the proposal.</p>	<p>Section 22.5.1, Section 22.5.4.1, Section 22.6.1, Section 22.6.2.1, Section 22.7.1 and Section 22.7.2.2</p>

23.1.3 Areas of influence

The proposal's area of socio-economic influence was defined by considering:

- ▶ Social and economic characteristics at local and regional levels
- ▶ Stakeholders' inputs about the proposal's potential to affect them
- ▶ The potential for proposal elements and activities to affect the social environment near the study area or in nearby communities
- ▶ Impacts or benefits that may be experienced by residents or other stakeholders in the region, which includes the Moree Plains, Gwydir and Goondiwindi Shire local government areas (LGAs)
- ▶ 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 or noise, while 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 influence for the Social Impact Assessment (SIA) are:

- ▶ 'Study area', referring to the rail corridor and temporary disturbance footprint
- ▶ 'Nearby communities', which refers to North Star, Boggabilla, Toomelah and Goondiwindi
- ▶ 'Proposal region', which refers to the Gwydir, Moree Plains and Goondiwindi LGAs (refer Figure 23.1).

The study area for the economic impact assessment includes the three LGAs in the proposal region: Goondiwindi, Moree Plains and Gwydir. For the purposes of the regional economic impact assessment, the economic catchment is defined 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 broader regional economic benefits.

23.1.3.1 Study area

The 'study area' for the SIA as defined in EIS Appendix O: Social Impact Assessment Technical Report Technical Report refers to:

- ▶ Rail corridor and associated crossing loop, maintenance siding, road crossings, bridges, culverts and associated infrastructure (shown in Figure 23.1 as the study area), also referred to throughout the EIS as the 'permanent disturbance footprint'
- ▶ Temporary disturbance footprint, including laydown areas, road and rail crossing work areas and a construction accommodation camp.

Most of the land near the study area is freehold. The proposed permanent disturbance footprint will directly impact on approximately 274 hectares (ha) of land, traversing 49 properties. Of these properties, 37 are adjacent to the existing rail corridor and the other 12 are located within the greenfield segment of the proposal or within the existing road and rail corridors. A description of the proposal is in Chapter 6: The Proposal and Chapter 7: Construction of the Proposal.

There are 10 private landowners directly affected by the proposal, most of which are large rural holdings producing cattle, cotton, wheat and/or crops. Of these landowners, seven are within the brownfield section (adjacent to the existing rail corridor) and three are affected by the greenfield section, requiring acquisition of land. The SIA also considered the potential for impacts on landowners whose properties are adjacent to the study area and has considered key demographic characteristics of the SA1 areas within which the proposal is located.

23.1.3.2 Nearby communities

Towns within 20 kilometres (km) of the proposal have been considered as 'nearby communities' as they 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 proposal area. North Star is Gwydir Shire's most northern township, and is a local hub for surrounding land holders, offering a public school, community networks and places to socialise. The North Star community—including the town and surrounding landholdings—may be affected by traffic, rail noise, the location of the workforce accommodation camp, and/or cumulative issues between Narromine to North Star and the proposal.

Boggabilla is a rural town located at the juncture of the Newell Highway and the Bruxner Way approximately 8.5 km west of the alignment. Boggabilla may experience the proposal's employment or economic benefits, but there also is potential for changes to connectivity or community connections to occur, and residents may also be concerned about flooding impacts. There is a strong connection between the Boggabilla and Toomelah communities.

Toomelah, an Aboriginal community, is located approximately 2 km east of the most northerly part of the study area, adjacent to the Macintyre River. There is potential for both benefits (via employment or economic development) and impacts (via safety issues, noise impacts, changes to the cultural landscape and use of the landscape or impacts on connectivity) in Toomelah.

The next nearest centres of Moree, Wyallda and Bingara are more than a one-hour drive from the study area, and while there is potential for residents of these towns to benefit from proposal employment or business opportunities, there is negligible potential for material social impacts in these towns as a result of the proposal.

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

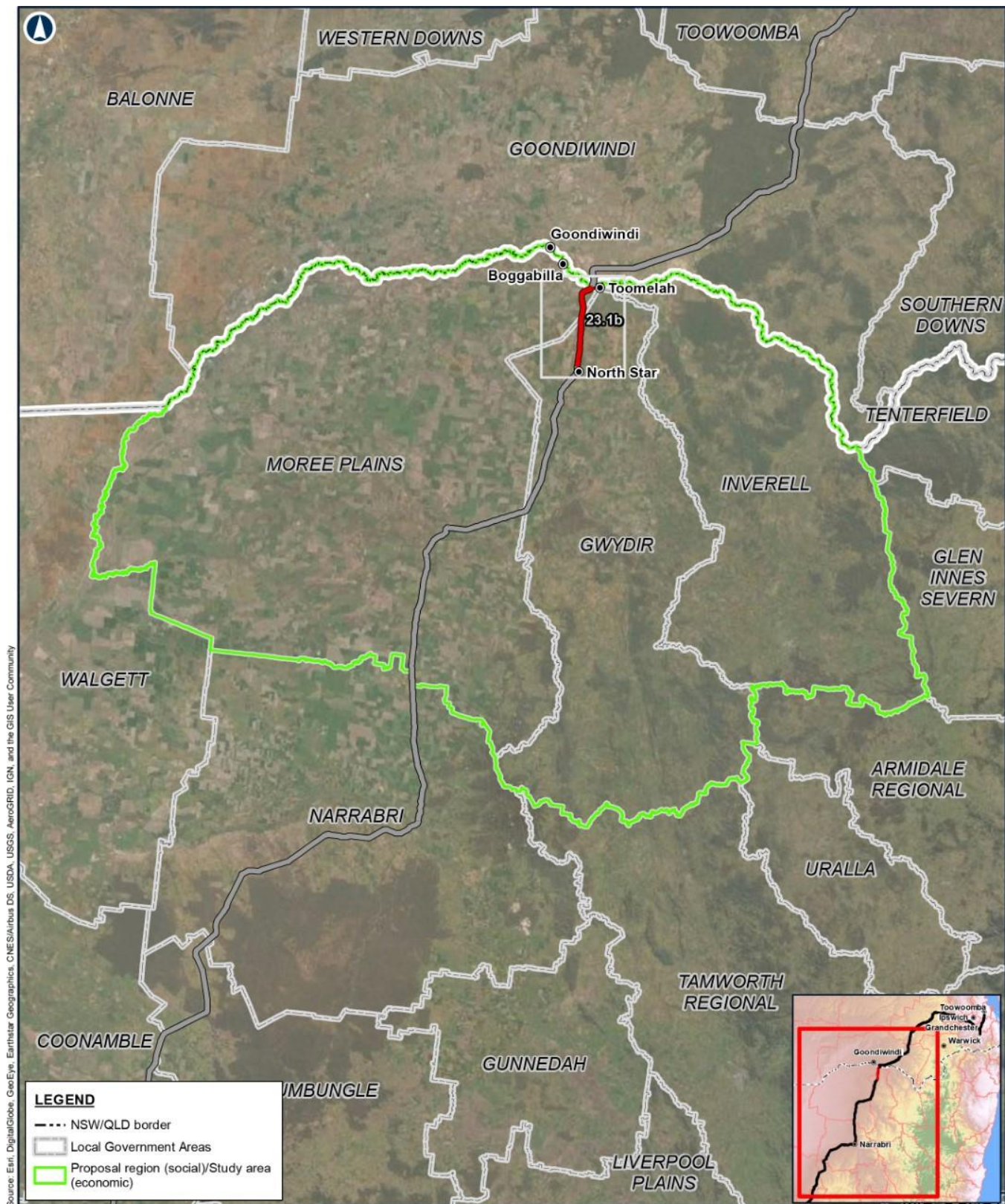


Figure 23.1a: Areas of social influence

NORTH STAR TO NSW/QLD BORDER

50km

LEGEND

- Localities
- North Star to NSW/QLD border alignment
- Adjoining alignments

Coordinate System: GDA 1994 MGA Zone 56
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Figure 23.1b: Areas of social influence

NORTH STAR TO NSW/QLD BORDER

4.5km

Coordinate System: GDA 1994 MGA Zone 56

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Paper: A4

Scale: 1:150,000

LEGEND

- Localities
- Chainage (km)
- Existing rail (operational)
- Existing rail (non-operational)
- Adjoining alignments
- Major roads
- Minor roads
- SIA study area

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Approximately 97 per cent of residents in Toomelah and 56 per cent of residents in Boggabilla are Aboriginal People with generally very 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.

TABLE 23.2 NEARBY COMMUNITIES, LOCATION RELATIVE TO PROPOSAL AND POPULATIONS (2016)

Community	Location	Population (2016)	Aboriginal People (2016)
North Star	1.5 km south of study area	230	3.0%
Boggabilla	8.5 km west of study area	990	56.7%
Toomelah	2 km east of study area	202	97.0%
Goondiwindi	15 km northwest of study area	6,355	5.9%

Source: Location distances were estimated using Google Maps. Population data sourced from the ABS Census, 2016a.

23.1.3.3 Proposal region

The proposal traverses the LGAs of Gwydir Shire (in the proposal's south) and Moree Plains Shire (in the proposal's north). Approximately 18 km of the proposal is within the Gwydir LGA, and approximately 12.6 km is within the Moree Plains LGA.

As noted in Section 23.1.3.2, Goondiwindi functions as the regional centre for other nearby towns, and the Goondiwindi Regional Council 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.

23.1.3.4 Regional economic catchment

As noted in Section 23.1.3, the study area is defined in Appendix I: Economic Assessment Technical Report to include the three LGAs in the proposal region—Goondiwindi, Moree Plains and Gwydir LGAs. For the purposes of regional economic impact assessment, the economic catchment is defined as the New England and North West Statistical Area Level 4 (SA4), which is representative of the broader region within which workforce and business participation could result in regional economic benefits.

23.1.4 Social impact assessment methodology

This section describes how the social impact assessment was undertaken.

The key steps in the SIA were:

- ▶ 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 areas of social influence and the scope of assessment
- ▶ Develop a social baseline that combined quantitative and qualitative data, to provide a detailed picture of existing conditions in local and regional communities
- ▶ Assess the likelihood, nature and distribution and potential social impacts and benefits, and evaluate their significance for social conditions
- ▶ Develop management measures that avoid, reduce or offset social impacts, and maximise the proposal's benefits.

The SIA methodology is detailed in Appendix O: Social Impact Assessment Technical Report. Key steps are detailed below.

23.1.4.1 Stakeholder engagement

The EIS consultation process is described in Chapter 8: Consultation. The SIA engagement process was integrated with the ARTC's engagement process, and SIA-specific engagement was undertaken to ensure the SIA was informed by input from affected and interested stakeholders, as detailed in Table 23.3.

A profile of key stakeholders' key issues is provided in Section 23.4, and the results of stakeholder engagement were incorporated throughout the assessment.

TABLE 23.3 SOCIAL IMPACT ASSESSMENT ENGAGEMENT

Stakeholder groups	Objectives	Engagement
Directly impacted landowners	<ul style="list-style-type: none"> ▶ Discuss the SIA scope ▶ Obtain landowner input on potential impacts, benefits and mitigations 	<ul style="list-style-type: none"> ▶ Landowner workshop ▶ SIA also incorporates analysis of the results of Community Consultative Committee (CCC) meetings (which represent landowners) and ARTC meetings with landowners
Aboriginal community members	<ul style="list-style-type: none"> ▶ Identify community values ▶ Seek inputs on opportunities for economic and community development ▶ Obtain community input on potential impacts, benefits and mitigations 	<ul style="list-style-type: none"> ▶ Toomelah–Boggabilla Local Aboriginal Land Council (LALC) Cultural Heritage and SIA Meeting ▶ Toomelah Community Drop-in Session. ▶ Moree Plains Local Aboriginal Land Council Cultural Heritage and SIA Meeting
Landowners and community members	<ul style="list-style-type: none"> ▶ Provide a briefing on draft SIA findings for discussion with the Toomelah–Boggabilla LALC and seek feedback 	<ul style="list-style-type: none"> ▶ Toomelah–Boggabilla LALC workshop on draft EIS and SIA findings—assessment and mitigations
Landowners and community members	<ul style="list-style-type: none"> ▶ Provide information about the proposed alignment and EIS process ▶ Enable community members to contribute their views on the scope of potential social impacts and benefits ▶ Collect information on social baseline values 	<ul style="list-style-type: none"> ▶ North Star Community Drop-in Session ▶ Boggabilla Community Drop-in Session ▶ Goondiwindi Community Drop-in Session ▶ Toomelah Community Drop-In Session
Local governments—Moree Plains Shire, Gwydir Shire and Goondiwindi Region	<ul style="list-style-type: none"> ▶ Discuss the SIA scope and seek inputs on local issues and the focus of assessment ▶ Provide an update on the EIS process and schedule ▶ Provide a briefing on draft SIA findings for discussion with councils and seek feedback 	<ul style="list-style-type: none"> ▶ Gwydir Shire Council meeting ▶ Moree Plains Shire Council meeting ▶ Goondiwindi Regional Council meeting ▶ Goondiwindi Regional Council meeting with Mayor, councillors and staff ▶ Gwydir Shire Council meeting with Mayor, councillors and staff ▶ Moree Plains Shire Council meeting with Mayor, councillors and staff
Community and Government agencies Education, Health, Police Ambulance, Fire and Rescue, Aboriginal service providers	<ul style="list-style-type: none"> ▶ Collection information on social baseline values as they relate to social infrastructure ▶ Potential implications of the proposal for the provision of community, health and emergency services 	<ul style="list-style-type: none"> ▶ Social infrastructure providers' workshops in Warialda and Boggabilla ▶ Meetings with service providers and community members at Boggabilla Community Connect event ▶ Interviews with Toomelah school principal and health clinic staff
Businesses and business organisations	<ul style="list-style-type: none"> ▶ Identify businesses' views on potential impacts and opportunities 	<ul style="list-style-type: none"> ▶ Participation in Community Drop-in Sessions and Landowner Workshop
Community and environmental organisations	<ul style="list-style-type: none"> ▶ Seek community organisations views on potential social impacts and mitigation partnerships 	<ul style="list-style-type: none"> ▶ Participation in ARTC Community Information Sessions ▶ Boggabilla Community Connect Event

23.1.4.2 Scoping

The process for defining the SIA scope included:

- ▶ Evaluating the likelihood of social impacts and benefits in relation to each key matter identified in the Department of Planning, Industry and Environment's (DPIE) EIS Scoping Tool (as referenced in the SEARs)
- ▶ Identifying potential material social impacts and the potential for social opportunities or benefits
- ▶ Identifying links to EIS investigations.

The scoping process and outcomes are described in detail in Appendix O: Social Impact Assessment Technical Report. An assessment of potentially material impacts is provided in Section 23.7.

23.1.4.3 Social baseline

The social baseline provides a detailed description of social conditions in the areas of social influence. Investigations undertaken to develop the social baseline included:

- ▶ Analysis of key social indicators within the proposal area
- ▶ 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
- ▶ 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.

23.1.4.4 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 the Inland Rail Program's adjoining sections and other major projects in the proposal region.

At the conclusion of the impact assessment stage, a two-stage significance 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.

Further detail on assessment methods is provided in Appendix O: Social Impact Assessment Technical Report.

23.1.4.5 Integration with Environmental Impact Statement findings

The SIA considered the outcomes of stakeholder engagement conducted by ARTC as part of the EIS. The SIA also integrated the relevant findings of EIS technical reports, including proposal-specific and cumulative impacts, to identify any social impacts. The EIS considered issues identified by stakeholders as part of the SIA engagement process. Appendix O: Social Impact Assessment Technical Report details the SIA's links to EIS findings.

23.1.4.6 Social Impact Management Plan

The SIMP provides mitigation strategies and management measures for social impacts where the risk rating determined by significance evaluation was medium or high. These actions aim to reduce or appropriately manage social impacts during each proposal stage.

The process for SIMP development included:

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

23.1.5 Economic analysis methodology

The approach adopted for the EIA is reflective of a recognised industry approach. It represents a whole-of-life approach, comprising an evaluation of the economic impacts and benefits generated by the proposal across both the construction and operational phases.

Importantly, while this report is intended to support the NSW Planning Approval, economic impacts realised in Queensland are also captured to reflect the design and location of the proposal (across the NSW and Queensland border), and the nature of the impacts and flow of economic activity generated by the proposal, which will extend across state borders between local and regional economies.

23.1.5.1 Economic benefits assessment

A large proportion of the benefits of the Inland Rail Program stem from improving the connection between producers and markets, through both domestic markets in cities and international markets through ports. As such, an incremental cost-benefit analysis assessing each link of the Inland Rail Program individually and in isolation of the whole program will not capture the full impact that is expected to be delivered upon completion of the entire Melbourne to Brisbane connection. Put simply, the benefits of Inland Rail will outweigh the sum of the individual projects.

Accordingly, for the purposes of this assessment, there are two components to the cost-benefit analysis:

1. Evaluation of the likely benefits of the proposal (economic benefits assessment). This analysis assesses just those impacts that would be likely if freight operators were to respond to the completion of the individual proposal
2. Description of the economic performance measures calculated for the Inland Rail Program as a whole (as per the *Inland Rail Programme Business Case* (ARTC, 2015)).

23.1.5.2 Regional impact analysis

A regional impact analysis has been undertaken to highlight the economic impacts of the proposal on the regional, state and national economy using an equilibrium modelling framework. For the purposes of this analysis, a computable general equilibrium (CGE) model was developed to examine the flow-on impacts arising from the proposal on the broader economy. These impacts were modelled using KPMG-SD, a proprietary regional computable general equilibrium model of the Australian economy developed and maintained by KPMG.

KPMG-SD is a suitable tool for quantifying the industry, regional and economy-wide impacts of major projects like Inland Rail, because it can capture the upstream and downstream linkages between the proposal's activities and the rest of the economy. KPMG-SD also provides estimates of employment supported through these investment shocks, noting that estimates of employment produced by the model reflect the direct and indirect jobs generated across the economy.

The regional economy is represented by the New England North West labour market region.

23.1.5.3 Cumulative economic assessment

The cumulative EIA refers to the potential impact of cumulative stimulus to the economy resulting from a set of existing or planned projects within or adjacent to the proposal region.

Specifically, the EIA considers the potential impacts of Inland Rail's adjacent Narrabri to North Star (N2NS) and Border to Gowrie projects, and those state significant projects within the Gwydir and Moree Plains LGAs that were planned or being constructed or operated at the time the SEARs were finalised.

The cumulative economic impact of interacting projects was assessed by developing a construction and operation timeline (including workforce profile) to evaluate the spatial and temporal relationship between the proposal and other projects. The cumulative impact on local business and industry, and demand for labour and material was assessed.

23.2 Legislation, policy, standards and guidelines

23.2.1 Social Impact Assessment Guideline

The *NSW Social Impact Assessment Guideline State significant mining, petroleum production and extractive industry development and SIA Scoping Tool* (DPE, 2017) is a non-statutory guideline that provides direction on assessing the impacts of state significant resource industry projects under the EP&A Act.

The SIA has been conducted in accordance with the SIA Guideline and the SEARs, including provision of:

- ▶ Scoping and preliminary significance assessment at an early stage of the SIA, referring to the Social Impact Assessment Scoping Tool (DPE, 2017)
- ▶ An inclusive stakeholder engagement process
- ▶ Ensuring suitable indicators are chosen and developed in relation to pre-existing conditions
- ▶ 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
- ▶ Co-operation with other EIS disciplines to ensure integration of results with a bearing on the social environment
- ▶ Development of adaptive management and monitoring strategies.

The SIA guideline's principles are relevant to transport infrastructure projects and are summarised in Table 23.4 along with the SIA's response and relevant sections.

TABLE 23.4 SOCIAL IMPACT ASSESSMENT GUIDELINE PRINCIPLES

Principles	Description	Relevance to the proposal	EIS section
Action-oriented	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	Section 23.6
Adaptive	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	Section 23.6 Appendix O: Social impact assessment Sections 8.2, 8.7
Distributive equity	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	Section 23.5.2 Appendix O: Social Impact Assessment Technical Report Sections 7 and 9

Principles	Description	Relevance to the proposal	EIS section
Life cycle focus	Seeks to understand potential impacts (including cumulative impacts) at all proposal stages, from pre-construction to post closure	The SIA includes a focus on pre-construction, construction, operation, and decommissioning, and includes assessment of cumulative impacts	Section 0 Appendix O: Social Impact Assessment Technical Report Sections 7 and 9
Impartial	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	Throughout
Inclusive	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	Sections 23.6.2, 23.6
Integrated	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	Section 23.4
Material	Identifies which potential social impacts matter the most, and/or pose the greatest risk to those affected	The SIA scoping process considered the likelihood, scale, severity and sensitivity of potential impacts. Social risks were evaluated using a social risk matrix	Section 22.7 Appendix O: Social Impact Assessment Technical Report Sections 4.4 and 9
Precautionary	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	All practical and achievable mitigations that were identified have been included in the SIA. The SIA considers residual risks	Section 23.7 Appendix O: Social Impact Assessment Technical Report Sections 7, 8 and 9
Proportionate	Scope and scale of SIA should correspond to the potential social impacts	Preliminary assessment of potential material impacts was undertaken as part of the scoping stage	Section 23.1 Appendix O: Social Impact Assessment Technical Report Section 4.4
Rigorous	Uses appropriate, accepted social science methods and robust evidence from authoritative sources	Methods, evidence sources, data quality and uncertainties are described and justified	Section 23.1 Appendix O: Social Impact Assessment Technical Report Section 3
Transparent	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 references to relevant assessment sections are drawn	Section 23.1.4 Appendix O: Social Impact Assessment Technical Report Section 3

23.2.2 Roads and Maritime Services' Environmental Planning and Impact Assessment

Practice Note: Socio-economic Assessment

Roads and Maritime Services' *Environmental Planning and Impact Assessment Practice Note: Socio-economic Assessment* (RMS, 2013) forms part of the common procedures under RMS's 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' SIA as defined by RMS's socio-economic practice note has been undertaken.

23.2.3 Land Use Conflict Risk Assessment

The *Land Use Conflict Risk Assessment Guide* (DPI, 2011) 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 process outlined in the *Land Use Conflict Risk Assessment Guide* (DPI, 2011) 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.

23.2.4 Regional plans

Within NSW, the proposal region is covered by the *New England North West Regional Plan 2036* (DPE, 2017). The plan 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 plan 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 of relevance to potentially impacted communities include:

- ▶ Deliver a variety of housing options, and promote development that contributes to the unique character of local communities
- ▶ Encourage diversification in agriculture, horticulture and agribusiness to grow these sectors and harness domestic and international opportunities
- ▶ Continue to develop access and logistics infrastructure on appropriate sites to encourage new industry opportunities
- ▶ Expand nature-based, adventure and cultural tourism places and enhance visitor experiences
- ▶ Encourage diversification in agriculture, horticulture and agribusiness
- ▶ Promote a vibrant, youthful and mobile workforce and provide services for the ageing population
- ▶ Identify and promote wind, solar and other renewable energy production opportunities.

Within Queensland, the Goondiwindi LGA is located within the southern part of the Darling Downs South West Region. The *Darling Downs Regional Plan* (DSDIP, 2013) was released to resolve competing state interests on a regional scale by delivering regional policy aimed at achieving specific regional outcomes. The plan provides policy responses to resolve the region's most important issues affecting its economy and the liveability of its towns. The regional policies aim to 'protect Priority Agricultural Land uses while supporting co-existence opportunities for the resources sector' and 'provide certainty for the future of towns'.

The *Darling Downs Regional Plan* (DSDIP, 2013) highlights the importance of strengthening inter-regional linkages to facilitate the movement of commodities and to allow shared opportunities in terms of employment, accommodation, infrastructure and service delivery. The Regional Plan also identifies opportunities to leverage rail infrastructure to boost economic development in the region, including facilitating opportunities for intermodal facilities east of Goondiwindi.

23.2.5 Council plans

The *Moree Plains 2035 Community Strategic Plan* (MPSC, n.d.) and *Gwydir Shire Community Strategic Plan 2017–2027* (GSC, 2017) describe the proposal communities' long-term aspirations and directions for their shires, and identifies the outcomes and strategic responses needed to achieve agreed directions. The plans belong to the communities and reflect the communities' main priorities. The *Goondiwindi Community Plan 2012–2022* (GSC, n.d.) 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 community plans identify shared community values including:

- ▶ Healthy, inclusive and cohesive communities
- ▶ A vibrant regional economy
- ▶ Environmental responsibility
- ▶ Proactive regional and local leadership
- ▶ Sustainable spaces and places.

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

Local Environment Plan priorities include:

- ▶ Recognising places of Aboriginal heritage and cultural significance and European heritage significance
- ▶ Encouraging the proper management, development and conservation of environmental, economic and social resources
- ▶ Facilitating economic growth and development
- ▶ Facilitating development in accordance with flood management planning
- ▶ Facilitating development that is compatible with adjoining and nearby uses, and appropriate in scale and type to the characteristics of the zone
- ▶ Identifying, protecting, conserving and enhancing natural assets.

The *Goondiwindi Region Planning Scheme* (GSC, 2017) sets out the controls and use of land that apply to land in the region. The planning scheme's priorities include:

- ▶ Promoting a compact settlement pattern and access to the employment and services provided in towns
- ▶ Identifying future urban growth opportunities, such as the town of Goondiwindi
- ▶ Allocating sufficient land for industry diversification and development in the towns of Goondiwindi, Inglewood and Texas
- ▶ Recognising and protecting natural economic resources such as productive rural land whilst promoting opportunities for further economic diversification in these areas
- ▶ Protecting and enhancing biodiversity values to support a health ecosystem that underpins the liveability and prosperity of the region
- ▶ Maintaining the character and vibrancy of town centres as the pre-eminent locations for business, service provision and community life in the region
- ▶ Promoting the diversification of housing product to accommodate all age groups and household types and lifestyle choices.

23.2.6 Economic benefits frameworks and guidelines

The approach to the economic benefits assessment draws from the existing literature and guidelines for the economic appraisal of infrastructure projects, including:

- ▶ *Assessment Framework* (Infrastructure Australia, 2017)
- ▶ *Australian Transport Assessment and Planning Guidelines* (DITRDC, 2019)
- ▶ *Principles and Guidelines for Economic Appraisal of Transport Investment and Initiatives – Transport Economic Appraisal Guidelines* (Transport for NSW, 2016)
- ▶ Project Assessment Framework guidance material (Queensland Treasury, 2015).

23.3 Socio-economic environment

- ▶ This section provides an overview of the socio-economic baseline against which impacts were assessed, structured in general alignment with the *SIA Guideline's* (DPE, 2017) impact categories.

23.3.1 Surroundings

23.3.1.1 Aboriginal land

The Gomeroi People are the traditional custodians of the country the proposal is located on within NSW. North of the border, where Inland Rail connects to the South West Rail, it is on country claimed by the Bigambul People. In 1988, the 'Toomelah Report' noted that 'present knowledge suggests a connection of Aboriginal People with land in this area stretching back fifty thousand years' (Human Rights Australia, 1988).

The Gomeroi People have an active native title claim, which has been accepted as a registered claim by the National Native Title Tribunal but has not yet been determined by the courts (National Native Title Tribunal, 2011). Land parcels intersected by the proposal that are identified as NSW Government tenure, unknown tenure type or Crown land may be subject to native title rights.

Gomeroi connections to land were disrupted by pastoral settlement during the second half of the 19th century, but have been maintained, with many Gomeroi people living in the proposal region.

Toomelah, a former Aboriginal mission community, ceased to be a reserve in 1975 and, since then, has been self-managed. Community management strengths have grown considerably in Toomelah during the ensuing decades; however, the lack of community-based employment and intergenerational welfare dependency mean that socio-economic conditions in Toomelah are very poor.

23.3.1.2 Regional settlement

Moree Plains Local Government Area

Moree Plains LGA is a large rural shire of 17,906 km² with a population of approximately 13,159 in 2016. Moree Plains LGA is bordered by Walgett Shire to the west, Narrabri Shire to the south, and Gwydir Shire to the east (ABS, 2016a). The LGA's northern border is located adjacent to the border between NSW and Queensland. The LGA is on the crossroads of the Newell, Gwydir and Carnarvon highways. The municipal centre is Moree, located approximately 80 km southwest of the proposal.

Moree Plains Shire Council describes agriculture as 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, 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
- ▶ The Moree Water Park being developed by Moree Plains Shire Council to provide community water-based recreational and sports activities.

Moree Plains Shire Council notes 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' (RDA Northern Inland NSW, 2016).

Moree Plains Shire Council identifies opportunities as including significant scope for reducing rail-freight costs, the need for larger loading facilities, road-rail coordination with road upgrades providing access to loading facilities, container transport by rail that 'would expand the scope for containerised local processing and value-adding opportunities such as blended grains, increase investment potential for secondary processing, and support development of supply relationships with North Asia' (RDA Northern Inland NSW, 2016).

Gwydir Local Government Area

Gwydir Shire is a rural shire in NSW, with a land area of 9,260 km² and a population of approximately 5,258 in 2016 (ABS, 2016a). The LGA is on the crossroads the Gwydir Highway, which links the NSW North Coast to Outback NSW, and Fossickers Way, a north–south touring route. Bruxner Way traverses the northern edge of the LGA.

Gwydir LGA is bounded by the Tamworth LGA to the south, Narrabri LGA to the south west, Moree Plains LGA to the west, Inverell Shire to the east, and Armidale Regional Council and Uralla Shire to the south-east.

The largest towns are Wyallda (approximately 85 km south of the proposal), which services the northern part of the LGA; and Bingara (approximately 125 km south of the proposal), which services the southern part of the LGA. 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.

Community priorities identified as part of Gwydir Shire's *Economic Development Strategy 2017–2020* (GSC, 2017b) included growing the shire's population to increase the viability of local businesses, diversifying 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 Wyallda, 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.

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 km² and had a population of 10,630 in 2016 (ABS, 2016a). 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 north-east and Texas to the east, with smaller towns including Yelarbon, Toobeah, Bungunya and Talwood. The Leichhardt, Cunningham, Newell, Gore and Barwon and Bruxner Highways 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.

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.

23.3.1.3 Nearby communities

Figure 23.2 shows the proposal in the context of the local communities. The southern-most extent of the proposal starts approximately 1.5 km north of North Star. Boggabilla is approximately 8.5 km west-north-west of the proposal and Toomelah is approximately 2 km to the east of the alignment.

North Star

North Star is a rural village in the Gwydir LGA, located 43 km south of Goondiwindi and 80 km north-east of Moree. In 2016, the North Star State Suburb (SSC) had a residential population of 230, of whom approximately 40 live in town.

North Star was founded on grazing and agriculture, which remain the mainstays 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 local residents and surrounding farmers. Services include the North Star Primary School, North Star Sporting Club and the North Star Tourist Park. An Australia Post office opens on weekday mornings.

Boggabilla

Boggabilla is a small rural town (with a population of 551 in 2016 (ABS, 2016a)) within Moree Plains LGA, located immediately southwest of the Macintyre River and approximately 10 km south-east 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, and the heritage listed Boggabilla Courthouse dates to 1896 (OEH, 2018).

The Boggabilla SSC includes the Boggabilla town, Toomelah and households on surrounding properties, with a total population of approximately 990 (ABS, 2016a). More than half of the State Suburb's 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, while others commute to Goondiwindi for work.

Boggabilla has a range of local services that cater for the town's population and service Toomelah, including a primary school, supermarket, community health service, police station, post office, general store, country club, motel 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 south-east of Boggabilla and 21 km south-east of Goondiwindi and is within the Moree Plains LGA. Toomelah is an Aboriginal community which had a population of approximately 202 in 2016 (ABS, 2016a). The ABS estimates that the Census may have undercounted the Australian Indigenous population by 17.5 per cent (ABS, 2016b) and community members estimate the population as closer to 300 people.

Toomelah was established as an Aboriginal mission in the 1930s. In 1975, the land ceased to be a reserve and the freehold title was transferred to the NSW Aboriginal Lands Trust (Human Rights Australia, 1988).

Toomelah's facilities include Toomelah Primary School, a community health clinic and a large new community centre. Toomelah has strong links to Boggabilla and Goondiwindi and relies on these larger centres for the provision of other community services, shopping and professional services.

Goondiwindi

Goondiwindi was gazetted as a municipality in 1888 and served as a border crossing between Queensland and NSW. 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 of Goondiwindi had a population of approximately 6,355 people.

Goondiwindi is the primary economic hub for the Goondiwindi 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.

23.3.1.4 Road network

The Newell Highway is the major state road that services the region and traverses the northern extent of the proposal region. The Newell Highway connects to Bruxner Way at Boggabilla.

Other major roads within and adjacent to the study area include:

- ▶ Bruxner Way, which runs adjacent to the proposal for approximately 4.6 km between Ch 21 km and Ch 25.6 km
- ▶ Tucka Tucka Road, which runs southeast from Bruxner Way and is crossed by the proposal at Ch 30.0 km
- ▶ North Star Road, which runs adjacent to the proposal for approximately 18.8 km between Ch 1.0 and Ch 19.8 km.

23.3.1.5 Special features

The key cultural features near the proposal are landscapes and waterways that are culturally and socially significant to the Gomeri People.

The river system is the defining natural feature in the northern part of the study area.

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 traversed by the proposal include Mobbindy 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 (ARTC, 2018).

While much of the proposal region has been heavily modified by grazing and cropping land, there are significant environmental values attributed to the riparian areas 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, within the Inverell LGA.

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

23.3.2 Personal and property rights

23.3.2.1 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.

The existing non-operational Boggabilla rail corridor is of unknown tenure, owned by the NSW Government. Properties outside the existing non-operational Boggabilla rail corridor that are traversed by the study area include freehold land (approximately 28 per cent within the permanent disturbance footprint and 34 per cent within the temporary disturbance footprint), one parcel with NSW Government tenure, one parcel of unknown tenure type and four parcels of Crown land used for travelling stock use. Detailed information on tenure and land use is provided in Chapter 22: Land use and property.

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 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.

23.3.3 Communities

This section describes the proposal region's demographic characteristics. Additional data supporting this section is in Appendix O: Social Impact Assessment Technical Report.

In statistical areas with small populations, ABS makes 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 from table totals.

23.3.3.1 Study area

The proposal traverses two Statistical Area Level 1 (SA1s) in NSW (refer Figure 23.2). The two SA1s had a collective population of 517 people and 289 dwellings, while the SA1 to the proposal's north had a population of 315 people and 132 dwellings. The total residential population of the SA1s decreased by 13 people between 2011 and 2016. The SA1s have a sparse and dispersed population with a density of 0.14 persons per km² for the two NSW SA1s (refer Table 23.5).

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, 2016a). 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 the Index of Relative Socio-Economic Advantage and Disadvantage (IRSAD) and the Indigenous Relative Socioeconomic Index (IRSEO) (this section) and the Index of Education and Occupation (refer Section 23.3.8).

SEIFA IRSAD scores indicate that the population within SA1s in the study area had higher scores (less potential for disadvantage) than the standardised NSW standardised baseline score (refer Table 23.5). The northern-most SA1 was in the 7th IRSAD decile and the southern SA1 was in the 6th 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.

Figure 23.2 shows SA1s related to the proposal.

TABLE 23.5 PROPOSAL AREA INDICATORS

SA1	Area (km ²)	Population 2011	Population 2016	Population density 2016	No. dwellings 2016	IRSAD score	IRSAD decile
1119610 (NSW)	797.6	94	110	0.14	68	1051	7
1119612 (NSW)	1,553.5	423	394	0.14	221	1024	6
Total	4,082.6	793	819	0.46	421		

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

23.3.3.2 Local and regional populations

Table 23.6 shows the populations for the LGAs and nearby communities in 2016. The Gwydir LGA had a small population at 5,258 compared to Moree Plains LGA (13,159) and Goondiwindi LGA (10,630).

North Star State Suburb had a population of 230 living in town or on surrounding rural properties. The North Star village's population is estimated at a maximum of 50 based on the number of houses in town; however, a number of these houses are vacant.

Toomelah had a population of 202 in 2016, and Boggabilla had a population of 990. Goondiwindi had a population of 6,355 in 2016, with little change since 2011.

The State Suburb of Boonal is a rural area south of Toomelah, which was separated from the North Star SSC for the 2016 Census, and had a population of approximately 43 in 2016. Croppa Creek SSC (which is outside the proposal) was also divided from the North Star SSC for the Census 2016 and had a population of 120 in 2016. Together, North Star, Boonal and Croppa Creek had a population of 393 in 2016 compared to North Star's 423 in 2011, indicating a small population decrease between 2011 and 2016. The limited data available for the Boonal State Suburb is provided for completeness (ABS, 2016a).

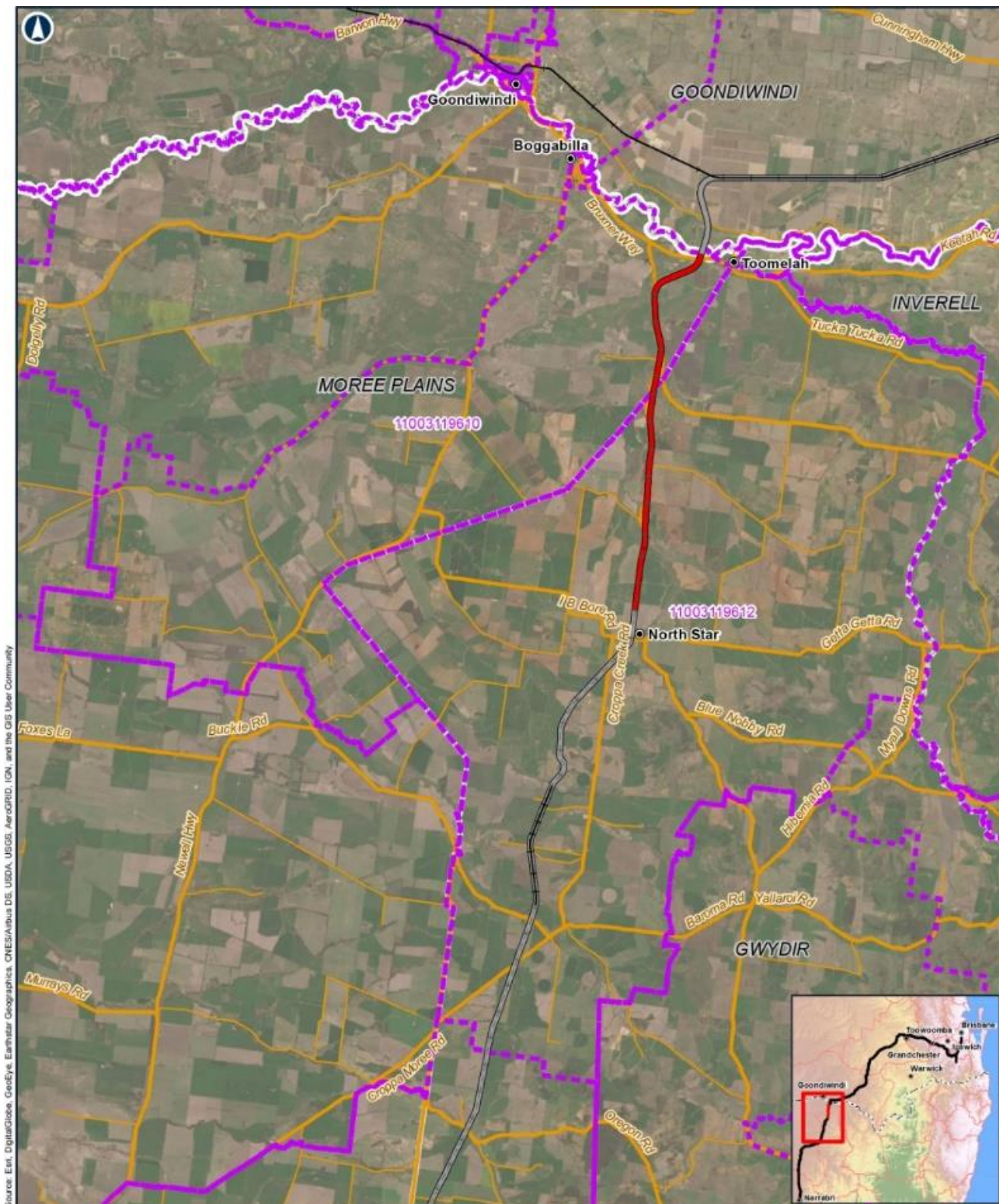


Figure 23.2: SA1s in and north of proposal

NORTH STAR TO NSW/QLD BORDER

10km

Coordinate System: GDA 1994 MGA Zone 56

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Date: 16/10/2019
Author: FFJV GIS

Paper: A4
Scale: 1:400,000

LEGEND

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

ARTC **InlandRail**

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

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 23.6 POPULATION CHANGE 2011 TO 2016

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

Table note:

* This change is indicative as the area of SSC area changed between 2011 and 2016.

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

23.3.3.3 Population growth

Table 23.7 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. The Goondiwindi LGA is expected to experience an average population decrease of approximately 0.2 per cent per annum until 2036.

TABLE 23.7 POPULATION PROJECTIONS 2016 TO 2036

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

Source: NSW Government *Population Projections—Main Series*, Queensland Government Population Projections, 2015 edition (medium series)

23.3.3.4 Indigenous population

The community of Toomelah had a residential population of 202 in 2016, of whom 97 per cent were Aboriginal People (refer Table 23.8). Boggabilla also had a population of 545, 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 LGA had higher percentages of Indigenous People than the NSW average, with Moree Plains Shire's Indigenous population substantially larger than the other two LGAs at 2,845 people (21.6 per cent).

TABLE 23.8 INDIGENOUS POPULATION PERCENTAGE 2016

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

Source: ABS Census 2016 Community Profiles (ABS, 2016g)

23.3.3.5 Demographic characteristics

Age profile

The proposal region is characterised by an ageing population with the median ages increasing by 1–3 years across the communities between 2011 and 2016 (refer Appendix O: Social Impact Assessment Technical Report). 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 as a consequence of the Aboriginal community.**

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 (refer Appendix O: Social Impact Assessment Technical Report).

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 (refer Appendix O: Social Impact Assessment Technical Report).

Households

There is a high proportion of couple family households with no children across the area of interest except for Boggabilla 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 as a whole (refer Appendix O: Social Impact Assessment Technical Report).

Gender

The three LGAs recorded a similar gender breakdown in 2016 with marginally more males than females. North Star recorded a higher percentage of males at 54.1 per cent of the population (refer Appendix O: Social Impact Assessment Technical Report).

Qualifications

The proposal region's percentages of people who had completed Year 12 or its equivalent was lower than State averages in all areas but highest in the Boonal State Suburb (this may be a consequence of a small population). High school completion was particularly low in Boggabilla (9.9 per cent) and Toomelah (5.9 per cent) (refer Appendix O: Social Impact Assessment Technical Report).

Goondiwindi SSC 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 a number of 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 had lower levels of tertiary qualifications than the NSW average (refer Appendix O: Social Impact Assessment Technical Report).

Income

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 income in Toomelah was less than half the State averages at \$328/week for personal incomes and \$687 for household incomes. While rents in Toomelah were low at a median of \$100/week (correlated to the Local Aboriginal Land Council's housing policy), this is evidence of severely constrained financial resources due to high unemployment and a lack of local business opportunities.

Socioeconomic disadvantage

IRSAD SEIFA scores for the three LGAs rank within the bottom 50th percentile for Australia (refer Table 23.9), which indicates that communities in the proposal region have a higher potential of socio-economic disadvantage compared to other LGAs in Australia.

At the local level, Boggabilla's score indicates a very high potential for disadvantage, while North Star's score indicates low potential for disadvantage. An equivalent SEIFA score for the urban locality of Toomelah was not available but it would be safe to assume it would be similar to or less than Boggabilla's score, and it is known that disadvantage in Toomelah is very high.

TABLE 23.9 SOCIO-ECONOMIC ADVANTAGE AND DISADVANTAGE

Area	SEIFA score	Rank with Australia (decile)	Rank within Australia (percentile)
Gwydir LGA	936	4	33
Moree Plains LGA	919	3	22
Goondiwindi LGA	957	5	48
Boggabilla SSC	756	1	3
North Star SSC	1023	7	64

Source: ABS 2016 Socio-Economic Indexes For Areas (2016f)

A more specific index, the 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. The communities of Boggabilla and Toomelah score just 81 on the IRSEO, indicating they are among the most disadvantaged Aboriginal communities in Australia (Public Health Information Development Unit (PHIDU), 2018a). 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.

Internet access

The regional area of interest has a lower proportion of households that do not have internet access from dwellings compared to NSW as a whole. Rates were particularly low in Toomelah at 73.1 per cent and Boggabilla at 44.2 per cent (refer Appendix O: Social Impact Assessment Technical Report). Toomelah residents have also advised that there is no mobile phone coverage in Toomelah. This is important when considering how proposal information is disseminated.

23.3.3.6 Travel behaviour

There are no passenger services operating to any of the towns in the area. Buses operated by Crisp Coaches and Greyhound Australia service the area.

Vehicle ownership

Vehicle ownership across the regional area of interest is statistically similar to that of vehicle ownership across NSW with the majority of households having one or two motor vehicles (refer Appendix O: Social Impact Assessment Technical Report). 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, leaving community members highly dependent on walking, bikes and shared vehicles.

Travel to work

A high proportion of employed people within the regional area of interest travelled to work via car as a driver or worked at home, which largely reflects farming operations (refer Appendix O: Social Impact Assessment Technical Report).

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 locality and demonstrates the limitations on Toomelah residents' employment options.

Key transport networks

The Newell Highway and Bruxner Way form the key transport spine for the region within NSW. 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 proposal for approximately 20 km.

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

The study area lies within the Western NSW RMS region of the Department of Transport. In the period 2011–15 there were 5,463 reported road accidents in this region, 3.7 per cent of which were fatal, 37.4 per cent 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 per cent and 41.2 per cent respectively), while moderate injuries were higher (58.9 per cent) (Centre for Road Safety, 2016). 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 (9 people per 100,000 per year compared with 4.1) (PHIDU) 2018a). This suggests there is a greater risk of road accident fatalities in Moree Plains Shire than elsewhere in the Western RMS region. Data are not reported for Gwydir Shire.

23.3.4 Housing and accommodation

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

23.3.4.1 Dwelling type

As is typical of rural areas, the majority of 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, while Goondiwindi (town), Moree Plains LGA and Goondiwindi LGA had a slightly more diverse housing mix (refer Appendix O: Social Impact Assessment Technical Report).

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 SSC, in particular, has a high percentage of unoccupied private dwellings (38.6 per cent) compared to the other statistical areas of interest. This is likely to reflect second and third dwellings on rural properties, which are used occasionally (e.g. for contract workers) or are vacant. Toomelah's occupancy rate was higher than the state average and reflects the potential for overcrowding (refer Appendix O: Social Impact Assessment Technical Report).

23.3.4.2 Housing tenure

There is a high proportion of private dwellings being rented across the regional area of interest compared to NSW, with only Gwydir LGA recording lower levels of private dwelling rentals (refer Appendix O: Social Impact Assessment Technical Report). The Toomelah–Boggabilla Local Aboriginal Land Council manages the provision of community housing within Toomelah, which reflects the 100 per cent rental figure for the locality.

Moree Plains LGA had a high proportion of social housing (10.1 per cent) compared to the figure 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 Appendix O: Social Impact Assessment Technical Report).

Housing in the community of Toomelah is entirely made of community-owned rentals administered by the Toomelah–Boggabilla Local Aboriginal Land Council while 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.

The estimated rate of homelessness across the three subject LGAs and two Statistical Area Level 2 (SA2s) increased between the 2011 and 2016 census dates. Moree Plains LGA (1 per cent) and Moree Region SA2 (1.2 per cent) had higher rates of estimated homelessness compared to NSW as a whole (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 0.3 per cent respectively (refer Appendix O: Social Impact Assessment Technical Report).

23.3.4.3 Housing trends

Purchase availability and prices

The proposal region is typical of a rural residential property market with a low turnover of residential properties. High volatility is apparent across the three postcode areas, which is likely due to large price differentials and limited listings within a small (rural) sales market. Data for purchase and rental housing availability are provided for postcodes.

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 Appendix O: Social Impact Assessment Technical Report). The median house price in Goondiwindi increased by 2 per cent in the year to September 2018 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 -111.3 per cent respectively, but on the basis of limited sales.

Gwydir LGA had a median house price of \$149,687 as at September 2018 while 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 2018a). There were no properties listed for sale in North Star.

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

Rental availability and cost

At the 2016 Census (ABS, 2016a), median rental payments in local communities and the LGAs were low compared to the NSW median, and highest in Goondiwindi at \$250.00/week in 2016. Mortgage repayments were also considerably lower than the NSW average (as is typical of rural areas), and lowest in North Star (\$309/month) (refer Appendix O: Social Impact Assessment Technical Report).

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 Appendix O: Social Impact Assessment Technical Report). There is no private rental market in Toomelah, but the ABS Census 2016 indicated that the median rental price was \$100.00/week.

There were 13 residential properties listed for rent in Goondiwindi (4390) as at 28 September 2018 (Domain, 2018b). No rental listings were recorded for North Star (2408) and Boggabilla (2409). 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 LGAs in the 12 months ending March 2018, with a total value of \$14,990,500 (refer Appendix O: Social Impact Assessment Technical Report). 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 (refer Appendix O: Social Impact Assessment Technical Report).

23.3.4.4 Short-term accommodation

Online listings indicate 14 motels and hotels offer 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. The most recent occupancy data for in Goondiwindi establishments is for the June 2016 when average occupancy was 49.8 per cent (ABS, 2016e). Anecdotal evidence offered in ARTC consultation indicated that Goondiwindi establishments have low vacancy rates.

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

Online listings 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 beds (ABS, 2016e).

Warialda's short-term accommodation consists of one motel, one hotel and a caravan park, while Bingara also has a motel and a hotel offering rooms. Gwydir Shire also has numerous camping grounds associated with major touring highways throughout the Shire.

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

23.3.5 Community values

Each of the LGAs in the proposal region has a community plan that was 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 flood risks
- ▶ Protection of places with cultural heritage significance
- ▶ Protect, conserve and enhance natural assets.

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

23.3.5.1 Amenity and lifestyle

Amenity refers to the use and enjoyment of private and public properties. Residential amenity in areas close to the proposal 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
- ▶ Rural landscape, characterised by hills, plains, vegetation and vistas across rural land.

Landowners in and near the proposal 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 that support the rural lifestyle include a clean and healthy environment, affordable housing, privacy, close community connections, access to local services and 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 as a whole 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.

Noise and vibration assessment found that noise levels in the proposal area were typical of a rural area, with low background noise levels. Key sources of noise near the proposal include highways, farming machinery, the wind in the trees, insects and birds.

23.3.5.2 Aboriginal cultural values

The Macintyre River has cultural and social significance to Aboriginal People as a place for family and community events, recreation, fishing and swimming. Consultation participants advised that sandy loam areas along river are traditionally designated burial places.

The Toomelah community and many Boggabilla residents have cultural and social connections to the landscape within and surrounding the proposal area, and Gomeroi People have a cultural responsibility for its care.

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

Social and family values are attached 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.

23.3.5.3 Cultural diversity

Other cultural diversity in the proposal region is represented by the proportions of households where a primary Language Other than English was spoken and residents who were born overseas (refer Appendix O: Social Impact Assessment Technical Report).

All LGAs and local communities had much lower percentages of households where a Language Other than English was spoken than the NSW average, with Goondiwindi having the highest percentage at 13.4 per cent, while the Goondiwindi LGA as a whole 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.

23.3.5.4 Community identity

Aboriginal People have a particular relationship to land and their identity is strongly connected to natural elements of place. As noted in Section 23.3.1.1, **the traditional custodians are strongly attached to the region's cultural landscapes**

Local communities' identities are generally founded on direct connections to land and the landscape, and in the strong self-help networks that have developed due to geographic 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' (PHIDU, 2018a).

Factors of particular 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.

23.3.5.5 Community cohesion

The study area and local communities have strong local networks that 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.

Using volunteering a measure of community strength, the proposal region reports high levels of volunteerism when compared with NSW, with 30 per cent of the population in Gwydir Shire involved in volunteer 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 93.2–93.8 people per 100 in the region being able to find support outside the home in times of crisis, compared with 93.4 per 100 in NSW (PHIDU, 2018c).

Data on acceptance of cultural difference shows that discrimination is more prevalent in Moree Plains Shire than in either the Gwydir Shire or NSW (21.5 people per 100 in Moree Plains Shire experienced 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).

23.3.6 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 the New England and North West Region (SA4).

23.3.6.1 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 23.10. 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 23.10 SUMMARY OF LABOUR FORCE CHARACTERISTICS PROPOSAL REGION 2016

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

Source: ^ABS 2016 Census of Population and Housing.

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 Appendix O: Social Impact Assessment Technical Report).

Health care and social assistance accounted for 9–10 per cent of each LGA's workforce, which was lower than the NSW average and may indicate a shortage of healthcare workers. The next most common industries of employment across the three LGAs were retail trade (5–10 per cent of the total) and education and training (7–9 per cent of the total).

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 Appendix O: Social Impact Assessment Technical Report).

23.3.6.2 Unemployment trends

Figure 23.3 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 per cent (3.1 percentage points) between June 2016 and June 2019, which was a considerable improvement; however, the unemployment rate in June 2019 (4 per cent) 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.

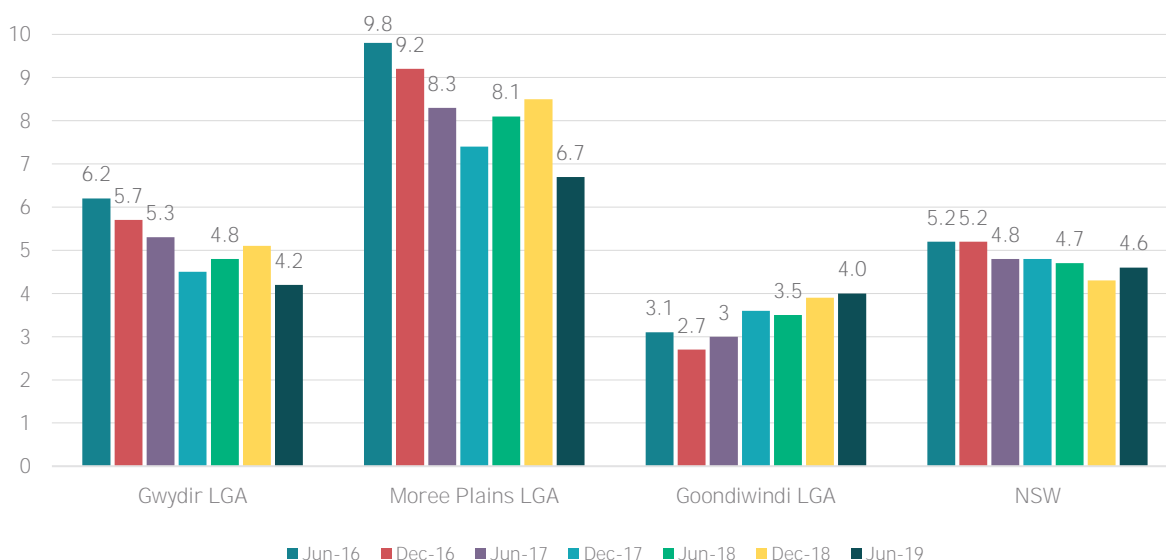


FIGURE 23.3 UNEMPLOYMENT RATE (PER CENT), JUNE QUARTER 2016–2019

Source: Department of Jobs and Small Business, 2018.

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 Appendix O: Social Impact Assessment Technical Report).

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, 2016a).

23.3.6.3 Labour and skills availability

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 is shown in Table 23.11. 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 a number of Toomelah residents have qualifications that 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 the North Star area, Boggabilla and Goondiwindi.

TABLE 23.11 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
Total sectors	605	108	558	1,265

Source: ABS Census—Working Population profiles, 2016d.

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 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 1,000 in June 2016 to 795 in June 2019 (see Appendix O, Figure 4). In June 2019, the Moree Plains LGA labour force included 452 unemployed people, with a further 237 unemployed in the Goondiwindi LGA and 106 unemployed in the Gwydir LGA. Collectively, these figures **represents a significant potential labour pool for the proposal's construction.**

The proposal region has capacity to supply a portion of the construction workforce, from within an experienced heavy and civil construction workforce (approximately 526 in June 2016) and from the pool of workers who are unemployed (795 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.

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.

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.

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

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

The industrial and consumption effects of the proposal will result in the creation of indirect jobs both due to upstream and downstream linkages between the proposal's **activities and the rest of the economy**, such as 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 Appendix I: Economic Assessment Technical Report 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.** 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.

23.3.6.4 Business capacity

There are no businesses operating in North Star, except for B&W Rural (an agricultural service provider that has a branch office there) and nearby agricultural properties. The General Store is currently closed, but there may be potential for the store to re-open if the construction accommodation camp is established in North Star. There are no businesses located in Toomelah.

Boggabilla has a small range of shops and services that 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 that 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 that may experience either direct demand from the proposal or from personnel expenditure.

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

Moree Plains Shire Council and Gwydir Shire Council 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 in Moree (the Moree Local Aboriginal Land Council, a consulting business, and an art studio) and one in Wyallda (an engineering business). There were no Indigenous businesses registered in Toomelah or Boggabilla; however, community consultation identified one 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.

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.

23.3.6.5 Regional development opportunities

The proposal is part of the Inland Rail Program, which will make a significant contribution to regional, state and national development for up to 100 years. Inland Rail benefits that would support regional economic development include:

- ▶ Stimulating establishment of businesses or industry precincts that 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.

23.3.7 Access to services and facilities

Appendix O: Social Impact Assessment Technical Report details the provision of social infrastructure relevant to the proposal and nearby communities. This section describes the provision and location of key services and facilities in the proposal region. A radius of 20 km from the proposal has been considered in recognition that people in the proposal 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 impacts such as noise or increased traffic.

23.3.7.1 Primary and secondary education

There is a total of four public primary schools and one public high school within 20 km of the proposal, as described in Appendix O: Social Impact Assessment Technical Report. There are also two private schools in Goondiwindi including **St Mary's and Border Rivers Christian College**. Three childcare centres, a kindergarten and a family day care scheme operate in Goondiwindi. The closest facilities to the proposal area are the North Star Public School, 1.5 km north of the proposal's southern extent and the Toomelah Public School, 2.5 km east in the north of the study area.

23.3.7.2 Further education and training

Further education and training facilities in the proposal region include the TAFE NSW—Boggabilla campus and the Gateway to Training Centre, as described in Appendix O: Social Impact Assessment Technical Report.

TAFE NSW 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, and there is potential for the proposal to stimulate delivery of relevant training through the Boggabilla campus.

Goondiwindi SILO Inc. (Schools Industry Links Outreach) trading as Gateway to Training is a community-based organisation, which aims to provide flexible and responsive lifelong learning opportunities for regional communities. SILO owns and manages the Gateway to Training centre in Goondiwindi, which operates on a commercial basis.

23.3.7.3 Hospital and health services

Goondiwindi Hospital is the primary healthcare facility that services the proposal region. Other community health centres within nearby communities include the Boggabilla Community Health Centre, Blue Care Goondiwindi and Care Goondiwindi, as described in Appendix O: Social Impact Assessment Technical Report. The Toomelah Outreach Health Clinic also provides health services to the community of Toomelah.

23.3.7.4 Police, emergency services and justice

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 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.

23.3.7.5 Other facilities

Two residential retirement facilities are located in Goondiwindi: Oak Tree Retirement Village and Kaloma Home for the Aged, described in Appendix O: Social Impact Assessment Technical Report.

Two community centres are located in Toomelah and Goondiwindi/Waggamba Community Centre as described in Appendix O: Social Impact Assessment Technical Report.

There is a wide range of recreational and cultural facilities located in Goondiwindi that service surrounding communities. In Toomelah, the Community Centre is the key formal recreation venues, while the Macintyre River and its banks provide a key recreational resource.

23.3.8 Health and wellbeing

A complex interaction of social, economic, environmental, behavioural and genetic factors helps to shape a population's health and wellbeing.

Nearby communities have relatively small populations with a significant Aboriginal presence and include one of Australia's most disadvantaged communities living in Toomelah. The following sections address the particular factors that influence Aboriginal health and wellbeing, as well as that of the general population.

The Moree Plains Indigenous Area has been used to illuminate Aboriginal health status. Boggabilla and Toomelah comprise 54 per cent of the population of this Indigenous Area.

23.3.8.1 Aboriginal population health and wellbeing

A person's Aboriginal status is an important indicator of their 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 et al., 2012).

This section outlines the status of the health and wellbeing of the Aboriginal population in the proposal region with a particular focus on the Boggabilla and Toomelah communities, relying mainly on data reported for the Moree Plains Indigenous Area. Boggabilla and Toomelah comprise 54 per cent of the population in this Indigenous Area.

Key indicators for the Moree Plains Indigenous Area include:

- ▶ The median age at death for Aboriginal People is 55 years, compared with 81 years for the general NSW population (PHIDU, 2018a)
- ▶ The SEIFA IRSEO provides a score of just 81, indicating that Boggabilla and Toomelah are among the most disadvantaged Aboriginal communities in Australia
- ▶ A rate of preventable hospital admissions more than 3 times that for the Moree Plains and Gwydir LGAs and 2.6 times that for the state's Aboriginal population, and nearly 4 times the rate for the State's general population (PHIDU, 2018a), likely due, in part, to limited resources for primary healthcare services
- ▶ The majority (57.1 per cent) of Aboriginal children were assessed as being developmentally vulnerable in one or more domains in the first year of school, compared with 35.88 per cent for the state's Aboriginal population
- ▶ Death from external causes (suicide, self-inflicted injuries and road traffic injuries) among the Aboriginal population occurs at an high rate—more than 11 times the state's overall average and almost double the state's average for its Aboriginal population
- ▶ 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 (PHIDU, 2018a).

Almost half (46.8 per cent) of Aboriginal households in private dwellings in Moree Plains are disadvantaged by not having access to the internet at home, compared with the state average for Aboriginal People at 22.5 per cent and 14.7 per cent.

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.

A lack of transport is a significant barrier to accessing health and community services and is particularly significant for the Toomelah community where car ownership is very low.

23.3.8.2 General population health and wellbeing

Key indicators that reflect health determinants and health status in the proposal region include:

- ▶ An ageing population, with Gwydir Shire having the oldest population with a median age of 48 years, compared with Moree Plains at 38 years, similar to the NSW median
- ▶ 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. Unemployment is associated with lower income, reduced life opportunities and poorer health and wellbeing. Youth unemployment is high in both Shires with more than 12 per cent of young people aged 15 to 24 years being unemployed.
- ▶ The rate of people assessing themselves as having fair or poor health is higher in Gwydir LGA than in Moree Plains LGA (17.8 people per 100 compared with 15.3 people per 100)
- ▶ Gwydir and Moree Plains LGAs have higher representations 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 (PHIDU 2018b, 2018c).

The Remoteness Index of Australia classifies the proposal region as Outer Regional Australia, characterised as having significantly restricted access to some goods, services and opportunities for social interaction (ABS, 2018).

Community engagement conducted to date indicates that Goondiwindi is well provided with health services; however, accessing services is an issue due to a lack of transport and limited financial resources, affecting their health and wellbeing.

23.3.8.3 Community safety

A measure of perceived safety is taken nationally, focusing on whether people feel safe to walk alone after dark in their local area. On this criteria, 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 LGA feel less safe (at 51 people per 100) (PHIDU, 2018b, 2018c).

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 LGAs in NSW, and the second highest rate of assault and domestic violence related assault per 100,000 people (refer Appendix O: Social Impact Assessment Technical Report).

23.3.8.4 Traffic safety

The proposal lies within the Western NSW Roads and Maritime Services region of the Department of Transport. In the period between 2011 and 2015 there were 5,463 reported road accidents in this region, 3.7 per cent of which were fatal, 37.4 per cent resulted in serious injury and 58.9 per cent resulted in moderate injury. Some 9.9 per cent of accidents involved Aboriginal People. The total rate of fatalities and serious injury were lower than the NSW rate (2.4 per cent and 41.2 per cent respectively), while moderate injuries were higher (58.9 per cent) (Transport for NSW, 2018).

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, 2018c). This suggests a greater risk of road accident fatalities in Moree Plains Shire than elsewhere in the Western RMS region. Data are not reported for Gwydir Shire.

23.4 Stakeholder engagement

Table 23.12 lists the key stakeholder groups for the SIA and summaries the key issues identified through the stakeholder engagement process. Further details are provided in Appendix O: Social Impact Assessment Technical Report.

Key issues addressed in detail in other EIS chapters include:

- ▶ The rationale for the **proposal's** alignment and bridge structures (refer Chapter 6: The Proposal)
- ▶ Hydrological modelling (refer Chapter 13: Surface Water and Hydrology)
- ▶ Impacts on the road network and Travelling Stock Reserves (refer Chapter 20: Traffic and Transport)
- ▶ Impacts on agricultural land (refer Chapter 23: Socio-economic Impact Assessment)
- ▶ Land access arrangements (refer Chapter 10: Assessment Methodology)
- ▶ Biosecurity concerns (refer Chapter 11: Biodiversity)
- ▶ Future use of the existing rail line (this is outside the scope of the proposal)
- ▶ The location of intermodal hubs (this is outside the scope of the proposal).

Key issues addressed in this chapter include:

- ▶ Property severance and impacts on farms or grazing operations as a result of land acquisition or changes to access within and across the study area (refer Section 23.5.1.2 and 23.5.1.5)
- ▶ Loss of property amenity due to noise or dust, and potential for loss of access to water (refer Section 23.5.1.1)
- ▶ **Landowners'** concern about the potential for the proposal to affect property values (refer Section 23.5.1.2)
- ▶ Benefits for local communities (refer Sections 23.5.1.4 and 23.5.1.5)
- ▶ Stress and anxiety related to uncertainties or flood risks (refer Section 23.5.1.8)
- ▶ Local skilled labour and local employment, including employment of Aboriginal People (refer Section 23.5.1.4)
- ▶ Concerns about changes to the traffic network including reduced connectivity and increased travel times or response times for emergency services due to level crossings (refer Section 23.5.1.1)
- ▶ Traffic safety including safety at level crossings and the risk of young people accessing the corridor (refer Section 23.5.1.8)
- ▶ Benefits for businesses with potential/capacity to engage with the proposal, including construction work and supply to the construction accommodation workforce camp (refer Section 23.5.1.5)
- ▶ Reducing freight costs for local businesses (refer Section 23.1)
- ▶ The impacts and benefits of the proposed construction workforce accommodation camp in North Star (refer Section 23.5.1.6)
- ▶ Impacts on local Aboriginal People's attachment to the cultural, recreation and environmental values of the Macintyre River and remnant vegetation (refer Section 23.5.1.3)
- ▶ Concern that children, young people or people seeking suicide will access the rail corridor and be harmed (refer Section 23.5.1.8)
- ▶ Concern about further isolation of the Toomelah community (refer Section 23.5.1.3)
- ▶ Noise impacts of the railway line on the Toomelah community (refer Section 23.5.1.8)
- ▶ The opportunity for employment and community development initiatives to benefit the Toomelah and Boggabilla communities (refer Section 23.6.5)
- ▶ Impacts on emergency services (refer Section 23.5.1.8)
- ▶ Impact on the learning environment and pedestrian safety near the North Star Primary School (refer Section 23.5.1.7).

TABLE 23.12 STAKEHOLDER PROFILE

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

Stakeholders	Issues raised in consultation
Landowners— brownfield section	<ul style="list-style-type: none"> ▶ Concern about property access and road safety ▶ Severance of land resulting in impacts on the viability of agricultural businesses ▶ Disruption of stock cattle operations, including stock crossings ▶ Potential for a decrease in land values ▶ 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 ▶ Impacts on travelling stock reserves ▶ Management of land access arrangements including appropriate protocols with landowners ▶ Whether the redundant rail line in the existing rail corridor was to be removed (this is outside the scope of the proposal).
Moree Plains Shire Council: CEO, Executive Projects Manager, Directors	<ul style="list-style-type: none"> ▶ Combination of skilled/unskilled labour available that could work on the proposal ▶ Concern for community safety at level crossings ▶ Impacts of roadworks and road closures on travel times and safety during construction ▶ Wait times for emergency services and other vehicles at level crossings ▶ Biosecurity concerns through the accidental transfer of pests and diseases ▶ Build-up of debris during and after flooding events ▶ Connectivity of roads and formal and informal stock/equipment crossings ▶ Benefits for businesses with potential/capacity to engage with the proposal.
Gwydir Shire Council: Mayor, Councillors, Executive Manager, Social Service Manager, Town Planner	<ul style="list-style-type: none"> ▶ Benefits include taking freight off roads and reducing freight costs for local businesses ▶ Unemployment is low in the LGA, but the proposal represents an opportunity to diversify the employment base ▶ Interest in proposal recruitment strategies, workforce management plans and commute arrangements during construction ▶ Workforce accommodation camp at North Star would be a boost for the local sporting club ▶ North Star has limited public and community infrastructure ▶ Strong interest in crossings at North Star Rd and Forest Creek Rd in relation to potential impacts on traffic flows ▶ Interest in proposal impacts and/or management of travelling stock reserves ▶ Impacts of construction transport on local road networks and road conditions ▶ Support for increased community safety and awareness raising regarding the rail line's operation ▶ Continuity of availability of local roads.
Goondiwindi Regional Council: Mayor, CEO, Director Community and Corporate	<ul style="list-style-type: none"> ▶ Short-term accommodation is in high demand and there is an existing shortage ▶ Council is opposed to the proposal's location, believing another option for the alignment was preferable ▶ 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 levels increase ▶ Council believes the bridge solutions are inadequate to prevent exacerbation of flooding and impacts on the Macintyre River Floodplain ▶ Community concern regarding the proposal's potential to impact on their access to water, which is integral to agricultural businesses ▶ Potential for traffic increases in North Star Road to affect use by farm transport vehicles, particularly at harvest times ▶ Opportunity to get more local produce on the Western Railway Line ▶ Potential benefit of the proposal drawing on local services i.e. workers, ballast from local quarries, gravel puts, borrow puts, steel workers and fabrications. ▶ Licensing opportunities for local quarries so they can be utilised for future Council projects

Stakeholders	Issues raised in consultation
	<ul style="list-style-type: none"> ▶ Implications for movement of machinery and stock across the rail alignment ▶ Impacts on access and community safety at level crossings ▶ Local employment opportunities and on-the-job training.
Moree Local Aboriginal Land Council	<ul style="list-style-type: none"> ▶ Opportunity to use resource materials from the local quarry near Pallamallawa for the proposal ▶ Potential employment opportunities during construction for the local Aboriginal population ▶ Maintenance of vehicular connections will be critical.
Toomelah community: Toomelah–Boggabilla Local Aboriginal Land Council Toomelah Health Community Centre Toomelah Community Information Session	<ul style="list-style-type: none"> ▶ Strong attachment to the cultural, recreation and environmental values of the Macintyre River ▶ Concern that use of remnant vegetation for bush tucker and natural medicine will be lost ▶ Concerns about flooding and evacuation capacity in the event of a flood ▶ Opportunity for on-the-job training to increase employability ▶ Concern that children, young people or people seeking suicide will access the rail corridor and be harmed ▶ Concern about the impact of the railway line on access between Boggabilla/Goondiwindi and Toomelah, particularly for emergency services ▶ Concern about further isolation of the community ▶ Keen interest in participation in proposal employment and supply chain.
North Star community: Residents North Star Sporting Club	<ul style="list-style-type: none"> ▶ Potential for Moree to serve as an intermodal hub, creating additional jobs and sustaining the transport workforce ▶ Rail freight will be more efficient and cost effective for local producers ▶ Properties remain unworkable without good, well-planned connections ▶ Stock route management implications of having to herd cattle to a rail underpass or get large machinery across the railway corridor ▶ Concern about exacerbating flooding impacts on Toomelah ▶ Noxious weed and seed control ▶ The North Star Sporting Club could benefit from proposal investment through encouraging workforce use of the club ▶ Connectivity of the local road network is a significant concern.
Boggabilla community: Residents Community Health Service Boggabilla Central School NSW Police, Fire and Rescue and Ambulance	<ul style="list-style-type: none"> ▶ Connectivity and interface with road and rail will be critical from an efficiency and safety perspective ▶ Concern about the potential impact of the railway line on access between Boggabilla and Toomelah ▶ Impacts of the railway line on community safety, particularly regarding children climbing fences and playing on the tracks ▶ Noise from the railway line on the Toomelah community is a significant concern ▶ Interest in future use of non-operational rail through Boggabilla and how to maximise proposal benefits for Boggabilla community.
Businesses: Landowners, engineering and retail businesses, Goondiwindi Chamber of Commerce	<ul style="list-style-type: none"> ▶ Business opportunities identified by stakeholders included fencing, earthworks, construction material supply, water supply, and borrow pit material ▶ Opportunity for local businesses to service the workforce accommodation camp e.g. cleaning and cooking, ▶ Opportunity for the shop in North Star to re-open more regularly to service residents and the workforce ▶ Opportunity for a local business to establish a fuel depot in North Star ▶ Facilitation of intermodal hub facilities in the Goondiwindi, Moree and Gwydir regions.

Stakeholders	Issues raised in consultation
Health Services: Toomelah Community Health Centre Warialda Multipurpose Centre Goondiwindi Hospital	<ul style="list-style-type: none"> ▶ North Star has no local health services ▶ Goondiwindi provides access to a broad range of health services (GP, Hospital, Pharmacy, Pathology, Radiology) for residents of all nearby communities ▶ Toomelah Community Health Centre provides a holistic approach to health care but with limited funding, transport, telecommunications and internet infrastructure ▶ Transport and finances are major barriers for Toomelah residents accessing health care ▶ Toomelah described as living in grief, responding to high mortality rates ▶ A lot of local young people are at risk of suicide and the proposal may increase this risk ▶ Proposal represents opportunity for employment and community development initiatives (e.g. community healing, increased social interactions) ▶ Older population and asthmatics may be vulnerable during the proposal's construction phase ▶ Young children's potential to wander unsupervised and implications for safety ▶ Only health service capacity to service construction workforce is in Goondiwindi.
Emergency services: NSW Police NSW Fire and Rescue NSW Ambulance	<ul style="list-style-type: none"> ▶ With exception of police and Rural Fire Services based at Boggabilla, emergency service resources near the study area are limited, and NSW ambulance services ▶ Challenges with cross-border service provision—all 000 calls will be directed to Queensland. Goondiwindi is closer to the proposal but there are some limitations in jurisdiction. Queensland Fire and Emergency Services has Memorandum of Understanding to respond in NSW ▶ Current capacity to service construction workforce, if based at North Star, is limited ▶ Need for community rail safety awareness ▶ Impacts to community safety and proposal security risks associated with access to tracks, trespass, vandalism, accidental injury, theft ▶ Opportunity for joint training initiatives on rail incidents and emergency response ▶ Joint onsite training exercises for road/rail incidents for ARTC, police and emergency services.
Department of Education: North Star Public School Toomelah Public School Boggabilla Central School	<ul style="list-style-type: none"> ▶ Opportunity for school excursions to look at different proposal activities/interesting jobs/careers ▶ Noise and vibration impacts on North Star school learning environment ▶ Impacts to North Star community safety associated with student access to North Star Road.

23.5 Potential impacts

This section summarises the potential social and economic impacts and benefits that may result from the proposal.

23.5.1 Potential social impacts

The proposal's potential social impacts during construction, operation and decommissioning are summarised in the following sections and detailed in Appendix O: Social Impact Assessment Technical Report.

23.5.1.1 Surroundings

The proposal has the potential to impact on the amenity of people living near the proposal area during construction and operation. Areas of concern raised by stakeholders included construction and operational noise impacts, dust, changes to the connectivity of roads and properties, changes to the environment near Toomelah, and impacts on local character.

Noise from construction is likely to be intrusive on the quiet rural amenity experienced near the proposal area but would be transitory as construction activities move along the corridor, so particular places may only be affected for a period of week to months. Noise impacts from construction of bridges would last for longer periods. Laydown areas and the accommodation camp would be located in North Star, so there is also potential for noise to emanate from these sources. Noise from the proposal's operation may be experienced by nearby residents as intrusive, regardless of regulatory compliance.

The results of the air quality risk assessment for the proposal (Appendix L: Air Quality Technical Report) indicate that the unmitigated air emissions from the construction phase of the proposal pose a low risk of human health impacts but a medium risk of dust soiling, 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 are predicted to be lower than the proposal's goals at all identified sensitive receptor locations, with the exception of the annual criterion for PM_{2.5}. However, due to the elevated background monitoring data used it is expected that actual concentrations will be compliant at all sensitive receptor locations.

Potential impacts on the study area's surroundings are summarised in Table 23.13.

TABLE 23.13 POTENTIAL IMPACTS TO SURROUNDINGS

Impact area	Delivery phase	Potential impacts
Settlement pattern	Construction and operation	The proposal would not have any direct interface with urban centres. In adopting a brownfield corridor for all but a 5 km section of the proposal, changes to the settlement pattern are largely avoided. The proposal would result in severance of agricultural lots that would see a loss of function for severed portions and affect their permanent use for agriculture.
	Operation	The proposal will reduce the number of private road connections across the study area and therefore connectivity within and between properties. The proposal may stimulate establishment of businesses or industry precincts which will generate employment as well as demand for industrial land and potentially residential development.
Amenity	Construction	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, affect residents' lifestyle and/or cause sleep disturbance for some residents.
	Operation	In the greenfield section, the proposal is likely to be seen by property owners as a significant intrusion on their land holdings due to severance and impacts on the scenic character of properties. Rail operation would introduce a noise source for people living near the proposal. Rail noise levels are predicted to exceed noise levels that trigger the investigation of noise mitigations for three houses within 200 metres of the rail corridor, without which noise would have potential for noise to affect quality of life for these residents.

Impact area	Delivery phase	Potential impacts
Local character	Construction	Laydown areas and the accommodation camp are likely to impact on the rural character of North Star.
	Construction and operation	The rail corridor embankment and fencing may affect the rural character near the proposal area.
	Operation	The Macintyre River Viaduct will change the natural character of the river and its banks in the area of the bridge crossing.
Connectivity	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 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 on some sections during the construction phase; therefore, the Level of Service on those sections will be worse.
	Operation	<p>A rail-over-road bridge crossing of Bruxner Way has been proposed to avoid unacceptable traffic delays and potential safety issues on this key connector during the proposal's operation.</p> <p>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.</p> <p>There is potential for the bridge over Tucka Tucka Road and the Macintyre River Viaduct to act as a visual barrier in the landscape that would be experienced by Toomelah residents as increasing their isolation.</p> <p>Consolidation of rail crossings will reduce connectivity within and between properties near the proposal; however, the proposal provides an opportunity to upgrade and replace existing private level crossings along the existing rail corridor.</p>
Travel times	Construction	Construction of bridges and level crossings on public roads will require detours and cause temporary travel delays during the construction period.
	Operation	With trains of 1.8 km travelling at 80 km/hour long, travel delays of approximately two minutes per crossing have been estimated, which will cause minor travel delays.
Access to natural resources	Construction and operation	The Toomelah community's access to remnant forest areas along the non-operational rail alignment for native vegetation and cultural education of young people will be significantly and permanently disrupted.
	Construction	Social use and cultural uses of creeks and the Macintyre River will be disrupted in the areas where the bridges and viaduct would be constructed.
	Operation	Social and cultural uses such as fishing and environmental enjoyment of the Macintyre River, and Whalan Creek near the viaduct/bridge will be periodically disturbed by rail/train noise.
	Operation	<p>The potential to affect landowners' water access is discussed in Chapter 13: Surface Water and Hydrology and Chapter 14: Groundwater.</p> <p>Direct impacts on landowners' access to water may include destruction of bores in the study area, or disruption to water storage and management infrastructure, which may impact on the productivity and ease of management of farms. There is potential for earthwork cuttings to intersect shallow aquifers, which is predicted to result in a net loss in groundwater supply for one property owner (refer Chapter 14: Groundwater).</p>

23.5.1.2 Personal and property rights

ARTC has sought to minimise impact to local landowners by using the existing non-operational rail corridor for most of the proposal and has sought to use 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 ARTC.

The proposed permanent disturbance footprint may result in the severance of driveways and private access roads to properties. Private access to properties has been considered when determining the location and type of road–rail interface. Legal access to properties will be retained through the provision of alternative access roads or level crossings where appropriate. Consultation with affected landholders is ongoing to identify where impacts to private property access occurs and to determine appropriate measures to mitigate these impacts. Private stock crossings will also be confirmed during consultation with landholders.

The proposed permanent disturbance footprint will directly impact on approximately 274 ha of land, traversing 49 properties. Of these, 37 properties are located adjacent to the existing rail corridor and the remaining 12 are located within the greenfield segment of the proposal and the existing road and rail corridors. Land will be acquired through partial acquisitions of properties.

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 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.

Directly affected properties include ten properties where the predominate land use is cropping (refer Chapter 8: Consultation) with the land to be acquired for the proposal equivalent to:

- ▶ Less than 0.1 per cent of the properties' area for two properties
- ▶ Less than 5 per cent for four properties
- ▶ Percentages ranging from 5.5 per cent to 12.4 per cent for the remaining four properties.

The predominant land use on the remaining 24 directly affected properties is grazing native vegetation. One property of approximately 1.4 ha is owned by the NSW Government and would no longer be available for grazing. The other 23 grazing properties range in size from 1.8 ha to 6,216.7 ha, with an average size of 695.4 ha. For thirteen of these properties, the land area to be acquired is equivalent to less than 0.01 per cent of the property. Acquisition of land within a further five properties would be equivalent to less than 1 per cent of the property, and for an additional three properties the land area to be acquired is equivalent to between 1 and 2 per cent. For the remaining three grazing properties, the land area to be acquired is equivalent to 3.7 per cent for one property, 9.1 per cent for another, and 15.5 per cent for the third property.

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

Some of the directly affected properties would accommodate temporary uses throughout construction, while any additional land required for construction uses would be leased from landowners.

The extent of property impacts will be further determined during detailed design in consultation with landowners.

Potential impacts on personal and property rights are summarised in Table 23.14.

TABLE 23.14 POTENTIAL IMPACTS TO PERSONAL AND PROPERTY RIGHTS

Impact area	Delivery phase	Potential impacts
Property ownership	Operation	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. Partial acquisitions will sever or reduce the size of directly affected properties, as discussed above. Disruption to farms and severance of productive land may change the function or viability of some lots.
Farm connectivity	Construction	Construction of crossings and road realignments on private land may affect on-farm connectivity and disrupt property operations such as stock and machinery movements.

Impact area	Delivery phase	Potential impacts
Agricultural uses	Construction and operation	<p>During construction, no impacts to the accessibility of groundwater for stock watering, irrigation and farm use are anticipated. During operation, there is a potential for localised increased groundwater levels (refer Appendix N: Groundwater Technical Report).</p> <p>The proposal will dissect properties with potential to isolate infrastructure, reduce stock access, or affect drainage, water management or flooding patterns. ARTC will develop commercial and contractual agreements with landowners to mitigate or compensate for impacts on their properties.</p> <p>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.</p>
Farm movements	Construction and operation	<p>Consultation with landowners 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.</p>
Water pipelines		<p>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 to identify specific impacts and support the development of mitigations such as make good arrangements for disruption to water access.</p>
Property values	Construction and operation	<p>Landowners near the proposal are concerned that their property values could be affected. Research on the relationship between property values and infrastructure indicates that property prices are determined by a combination of the properties' use and amenity, and buyers' perceptions about the environmental impacts of infrastructure (Elliott, 2008), with responses to perceptions of risk varying. Assessment of the likelihood and magnitude of changes in property values was not possible given the individual circumstances of particular properties, pending agreements between ARTC and affected property owners, and the multiple factors at play.</p>
Concern about flooding	Construction and operation	<p>The proposal's potential to change overland water flows, property owners' water management systems or flooding patterns is causing stress and anxiety. ARTC has undertaken comprehensive engagement with landowners to develop the flood model for the EIS, with further engagement planned when the assessment is complete. Assessment of the proposal's potential to affect flooding patterns is detailed in Appendix H: Hydrology and Flooding Technical Report.</p> <p>A loss of access to higher ground within the non-operational rail corridor used by landowners and community members to protect stock and equipment during a flood is acknowledged. The proposal's operation require the construction of fencing which would prevent access to the corridor.</p> <p>Landowners raised the issue of scouring under bridges, which has been considered in the structural design of bridge and culvert elements. 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.</p>

23.5.1.3 Community and culture

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.

Changes to the environment near Toomelah have potential to harm the sense of identity and belonging to place, and for future generations' ability to continue social and cultural practices (such as fishing and enjoyment of the landscape) in this area. Ongoing cooperation with and support for the Toomelah community will be required to support their adaptation to environmental changes. This will include the development of employment and business opportunities to address the significant existing disadvantage in Toomelah.

North Star village has a current population of approximately 50 people (or less), and a population of approximately 230 people in the larger North Star State Suburb. The establishment of a construction camp at North Star would see a temporary population influx of up to 350 people. This would be a significant change for the North Star community, swelling the town's population to approximately 400 people at the peak of construction. This may have consequences for community character and identity and for demand on local services, as discussed in Section 23.5.1.7.

A detailed assessment of impacts on cultural heritage is provided in Appendix E: Aboriginal Cultural Heritage and Archaeological Assessment and Appendix F: Historical Heritage Technical Report.

Potential impacts to community and cultural values are summarised in Table 23.15.

TABLE 23.15 POTENTIAL IMPACTS TO COMMUNITY AND CULTURAL VALUES

Impact area	Delivery phase	Potential impacts
Toomelah community identity and functions	Construction	The construction of the Macintyre River Viaduct, and associated laydown areas, rail noise and other changes to the environment near Toomelah, have potential to affect residents' connections to the environment.
	Operation	The Macintyre River Viaduct has the potential to act as a visual barrier, which may increase Toomelah's perception of social and physical isolation. The proposal will also impact on current and future access to remnant forest for native vegetation, and on the amenity of the Macintyre River near the Macintyre River Viaduct. ARTC will develop community and economic development projects programs with the Toomelah community to offset these impacts.
Cultural values	Construction and operation	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 these impacts to affect both current and future generations.
North Star community size and character	Construction	The location of the construction accommodation camp and laydown areas in North Star will temporarily change the town's character and its identity as a quiet rural community.
	Construction	The establishment of the construction accommodation camp in North Star would see a temporary population influx. As a conservative estimate assuming a maximum case where all personnel were drawn from outside the proposal region, North Star's population would increase from approximately 50 to 400 people at the peak of construction. This may have consequences for community perceptions of safety and also on demand for emergency services.
Community cohesion	Construction	There is potential for proposal facilities or infrastructure to remain in North Star to create a positive legacy for community members and visitors.
	Construction and operation	Proposal-related effects on community cohesion may include physical severance between properties, disruption to movement across the rail corridor, disruption of families' links to land and potential for community conflict. ARTC's investments in local communities will focus on programs and services that strengthen local social networks and provide opportunities for people to meet and participate in community activities.

Impact area	Delivery phase	Potential impacts
Recreation	Construction	The construction workforce accommodation camp is proposed for land that skirts the North Star Sporting 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. This impact has potential to displace recreational use during the construction period.
	Construction	Local fishing clubs restock Macintyre River and fishing is allowed in the river. Social uses including family events and fishing may be disrupted in the area near Macintyre River Viaduct and in creeks affected by bridge works during construction.
	Operation	There is potential for rail noise to affect the amenity of the Macintyre River near the viaduct while trains are passing.

23.5.1.4 Employment

A small workforce of approximately 50 personnel would be required for pre-construction activities in late 2020–early 2021.

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 though the construction phase. 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. As noted in Section 23.3.6.3, the heavy and civil construction and construction services sectors employed 526 people within the proposal region, and there were 795 unemployed people June 2019 (see Appendix O, Figure 4), representing a likely source of labour for the proposal's construction.

The opportunity for up to two years' employment in proposal construction would be a significant benefit for both experienced and inexperienced personnel and would support the wellbeing of their families.

In drawing from a large labour pool in the North West New England and beyond, the proposal is unlikely to have significant difficulties accessing adequate labour for construction or operation. Based on recent labour market trends (refer Appendix I: Economic Assessment Technical Report) it is reasonable to assume that the regional labour market has the capacity to supply a significant portion of the workforce requirements of the proposal, without major disruption. Based on the industry of employment and occupation of the local workforce, it can be broadly assumed that the labour force has the appropriate skills and knowledge to support the proposal. There may, however, be shortages in specific trades, and cumulative demands for construction labour are likely.

The industrial and consumption effects of the Project will result in the creation of indirect jobs both due to **upstream and downstream linkages between the Project's activities and the rest of the economy**, such as 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). The regional economic modelling results (Section 5.4) 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**.

Economic impacts have been modelled using two labour market scenarios (refer Appendix I: Economic Assessment Technical Report). In the first scenario, it is assumed that labour markets are characterised by the availability of unemployed and under-employed workers with relevant skills (a 'slack' labour market). In the second scenario, it is assumed that real wages are sensitive to additional labour market demand (a 'tight' labour market). In the scenario with slack labour markets, the construction phase of the proposal generates an additional 514 jobs in the New England North West region (direct and indirect employment). With tight labour markets, the increase in jobs is significantly less at just 86 jobs, that is, the labour market response is dominated by workers moving from their current job to a higher paying job.

It is likely that the labour market conditions that will prevail during the construction phase of the proposal will be somewhere between those characterised by the slack and tight labour market scenarios. Among other factors, labour availability will be determined by cumulative and competing demand for trades and construction labour resulting from concurrent construction periods for infrastructure projects occurring in the adjacent or surrounding areas.

The proposal region's current workforce may not include personnel who are already skilled in the operation and maintenance rail infrastructure. Inland Rail's Skills Academy aims to increase workforce skills in regions through which Inland Rail would pass to strengthen their capacity for future skilled employment, which may include employment with ARTC.

Potential impacts to employment are summarised in Table 23.16.

TABLE 23.16 POTENTIAL IMPACTS TO EMPLOYMENT

Impact area	Delivery phase	Potential impacts
Construction employment	Pre-construction	Employment benefits include up to 50 jobs during the pre-construction phase and an average of approximately 190 jobs over the two years of construction, with a peak construction workforce of up to 350 personnel.
	Construction	A proportion of the construction workforce is expected to be drawn from the proposal region. The opportunity for up to two years' employment in proposal construction would be a significant benefit for both experienced and inexperienced personnel and is likely to support the wellbeing of their families.
Indirect employment	Construction	The Project will result in the creation of indirect jobs, primarily in the Professional, Scientific and Technical Services and Wholesale Trade sectors.
Labour availability	Construction	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 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. Proposal demand may contribute to shortages in specific trades and labour, particularly in the context of cumulative proposal demands.
Operation employment	Operation	A workforce of 15 to 20 personnel is anticipated for proposal operation, likely to include a combination of locally based personnel and personnel from other regions
	Operation	The proposal is likely to stimulate indirect employment growth through related investments in infrastructure, and freight terminals and related businesses.
Impacts of decommission	Decommissioning	Decommissioning would result in a temporary increase in employment opportunities, followed by a loss of jobs after decommissioning is complete.

23.5.1.5 Business and industry

Local and regional businesses will benefit from the construction phase. Opportunities to supply the proposal may include

- ▶ Supply of fuels, equipment, borrow and quarried material
- ▶ Services including
 - ▶ Fencing
 - ▶ Electrical installation (excluding rail systems) and instrumentation
 - ▶ Rehabilitation and landscaping
 - ▶ Cleaning and maintenance of construction and accommodation facilities
 - ▶ Trades services, possibly supplied by major construction contractors working out of Toowoomba
 - ▶ Professional services (e.g. human resources)
 - ▶ Community adaptation to the rail corridor (e.g. community and economic development services).

Transport or logistics businesses located in Goondiwindi may also have significant opportunities to bring construction materials to laydown areas and remove waste materials and recyclables from construction compounds. 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 regional benefits of greater significance.

The expansion in construction activity would support additional flow-on demand and additional spending by the construction workforce, and therefore business trading levels in the proposal region. Consultation inputs indicate the need to communicate with local businesses about the time-limited nature of the construction period to avoid encouraging local businesses to over-capitalise.

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

There may be some diminishment of tourists' experience of the rural landscape where the rail corridor is parallel to Bruxner Way; however, as rail corridors are not unusual in rural areas, this is not expected to have a significant impact on tourism visitation. Impacts on tourist accommodation are not anticipated as a construction workforce accommodation village has been proposed to accommodate all non-local personnel.

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

Potential impacts on businesses and industries during construction are outlined in Table 23.17.

TABLE 23.17 POTENTIAL IMPACTS TO BUSINESS AND INDUSTRY

Impact area	Delivery phase	Potential impacts
Local and regional supply to proposal	Construction	Opportunities for local/regional supply to the proposal may include fuel supply, borrow material and quarried material. Opportunities to provide services such as fencing, traffic management, landscaping, cleaning, maintenance, and trades services may also be available. There is also an opportunity for a third party (e.g. a local business to establish a fuel depot in North Star).
	Construction	There is 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.
Agricultural businesses	Construction	Severance of farms and/or impacts on farm infrastructure or connectivity may impact on productivity or farm management e.g. movement of stock or access to water. Whilst the Proposal's acquisition of land is likely to disrupt property accesses, access roads and cross-property movements, directly affected properties' ongoing use for their current purposes would be preserved, except for one small parcel owned by the NSW Government and used for grazing.
		Road works may disrupt farms' connectivity to markets, however this would be a temporary impact.
		Of the four travelling stock reserves (TSRs) near the study area, one is an isolated fragment where access is already restricted by the existing rail corridor and North Star Road. A second larger isolated parcel near Oakhurst Road would be severed, which would be mitigated by provision of a stock underpass. A third TSR 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. 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.
	Operation	There is potential for agricultural producers to access freight rail services to transport their produce to market.
Cumulative labour demands	Construction	There is potential for cumulative demands for construction workers and tradespeople to affect other business' access to labour.
Tourism	Construction	A temporary change in North Star's attractiveness as a tourism stop may be experienced, but the town appears likely to attract ongoing visitation given its location on touring routes, and the temporary nature of the use.
	Operation	Some diminishment of the rural landscape may be expected where the rail corridor is parallel to Bruxner Way. 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.

Impact area	Delivery phase	Potential impacts
Transport and logistics businesses	Operation	Transport or logistics businesses located in the proposal region are likely to have opportunities to service the construction phase.
	Operation	During operation, there may be a decrease in long-haul road freight volumes over time, affecting levels of trade for local transport businesses.
Regional development	Operation	Inland Rail benefits supporting regional economic development include improved freight linkages, improved access to regional market, reduced rail costs, improved reliability and potential to catalyse complementary supply chain investments.

23.5.1.6 Housing and accommodation

A construction workforce accommodation camp will be required to house non-local construction workers. ARTC engaged with the North Star Sporting Club who expressed interest in the option of using a land parcel adjoining the sporting club to the east. This is the site which has been assessed in the SIA.

As previously noted, as a conservative estimate assuming all personnel were drawn from outside the proposal region, the population influx due to the camp would temporarily swell the North Star population to a maximum of 400 people at the peak of construction. ARTC has consulted with the North Star about the accommodation camp proposal and will continue to consult with them to identify specific local concerns to be addressed as part of the Accommodation Camp Management Plan. ARTC will undertake a telecommunication service assessment and will implement mitigations to reduce any impacts on the existing telecommunication availability for North Star.

Planning for the accommodation camp will also consider the availability of water, waste, energy, telecommunications and road infrastructure to support the camp's operation without affecting residents' access to services. The proposed camp would be self-sufficient with regard to waste management, sewerage treatment and water access as discussed in Section 23.5.1.7; however consultation will be required with Gwydir Shire Council regarding road use, and with NSW Police regarding their capacity to address increased demands related to the non-resident workforce (refer Appendix O: Social Impact Assessment Technical Report).

Potential impacts relevant to housing and accommodation are summarised in Table 23.18.

TABLE 23.18 POTENTIAL IMPACTS TO HOUSING AND ACCOMMODATION

Impact area	Delivery phase	Potential impacts
Accommodation camp	Construction	The proposed accommodation camp's potential impacts include demands on limited emergency services, impacts on amenity and use of the Sporting Club's facilities, potential for stress on waste services and infrastructure in North Star, and concern about the proximity of the camp to North Star Primary School.
		There is a possibility that increased trade from the proposal's personnel could support the North Star general store to re-open.
		The accommodation camp is proposed for land which currently accommodates community sporting events, as noted in Section 23.5.1.3.
	Operation	The accommodation camp could leave a positive legacy for the North Star community, with details to be agreed with the North Star community during the construction phase.
Housing affordability	Construction	Proposal impacts on housing affordability or access are not expected; however, cumulative impacts on housing access are possible.

23.5.1.7 Access to services and infrastructure

The proposal's construction workforce may generate a small increase in demand for health and emergency services in the proposal region. For the most part this would involve minor injuries and illness attended to by GPs in Goondiwindi. Goondiwindi Regional Council 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 services. There are no health services in other nearby communities that could be affected by increased demand.

The construction workforce accommodation camp will generate a temporary increase in demand for police and emergency services in the North Star area. Consultation with emergency services and Gwydir Shire Council indicated that service capacity may 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 oversized 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.

Construction facilities (laydown areas and the accommodation camp) have potential for affecting the amenity of the North Star Primary School and are likely to generate concerns regarding traffic and pedestrian safety.

The construction workforce will generate significant additional requirements for waste management and septic treatment in North Star, which is being addressed through discussions with Gwydir Shire Council about local infrastructure capacity, and onsite **management facilities as part of the accommodation camp's design**. Of the 17 utilities located within the study area, 14 are proposed to be relocated, one is proposed to have utility protection, and two are deemed unaffected.

During operation, 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, which can have serious consequences in an emergency. ARTC will work with emergency services to develop joint working arrangements to address potential impacts on emergency services and service response times during construction and operation.

The operational workforce will not create any significant population increase and is therefore unlikely to result in any other significant increased demand for services or 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. The proposal would also need to consider its requirements for recovery support services.

Potential impacts in relation to services and infrastructure are summarised in Table 23.19.

TABLE 23.19 POTENTIAL IMPACTS TO SERVICES AND INFRASTRUCTURE

Impact area	Delivery phase	Potential impacts
North Star Primary School	Construction	There is potential for noise, traffic or and dust from laydown areas and accommodation facility in North Star to affect the amenity of North Star Primary School, and a likelihood of concerns about students' safety. ARTC is consulting with the Department of Education and the school regarding the potential for impacts on the school's environment. ARTC will enable relocation of the school's primary access point from North Star Road to David Street.
Health and emergency services capacity	Construction	The construction camp will generate a temporary increase in demand for police and emergency services in the North Star area. ARTC's construction contractors will employ paramedic or nursing staff to reduce peak workforce demands on health services. ARTC will require the contractor to develop a workforce access strategy that reduces the number of commuter vehicles travelling between proposal worksites and the accommodation camp. The construction workforce may also generate a small increase in demand for health services in the proposal region, which would be met by Goondiwindi health services.
	Construction	Emergency service vehicles may be periodically delayed at the construction sites for the grade-separated crossings of Bruxner Way and Tucka Tucka Road and at level crossings.
	Operation	Road/rail accidents, derailments, or other major incidents may place strain on already limited emergency services requiring consideration of increased government funding for police and emergency services.
	Operation	Response times for emergency services may be delayed at level crossings by approximately two minutes. ARTC will work with emergency services to identify potential mitigations.
Service access	Construction	Disruption to access along Tucka Tucka Road during construction may delay Toomelah residents' travel to health and community services.
Support services	Construction	There is potential for an increase in demand for family and individual support services to assist people to cope with changes brought by the proposal.
Utilities	Construction	Of the 17 utilities located within the study area 14 are proposed to be relocated, one is proposed to have utility protection, and two are deemed unaffected.
Waste management	Construction	Waste services and septic treatment infrastructure in North Star are limited and the temporary increase in demand generated by the construction accommodation camp will need to be addressed by ARTC and/or the camp service providers.

23.5.1.8 Health and wellbeing

Stakeholder engagement identified community concerns about the potential negative impacts of the proposal on residential amenity, farm management and local connectivity, which could affect their wellbeing. The proposal's potential to exacerbate the effects of flooding on community safety has also been raised as a concern by land holders and Toomelah residents, which is addressed in Chapter 14: Groundwater.

Uncertainty and fears about proposal impacts are likely to cause stress and contribute to anxiety. Some community members have also expressed anxiety about the potential for flood risks to be exacerbated. 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. Stress and anxiety related to environmental change is also likely to be present in the Toomelah and potentially Boggabilla communities.

Existing risk factors and the potential for Toomelah community members to access the rail corridor for suicide were 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. Consultation with Toomelah service providers also identified the potential for young children to access the rail corridor, and for young people to access the corridor out of boredom or to engage in risk-taking behaviour. Mitigation of this risk will include design and security measures, along with community and economic development strategies developed in consultation with the Toomelah community.

Proposal design measures which will reduce the risk of suicide include:

- ▶ 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
- ▶ Nearest abutment (connection to the rail corridor at ground level) is located on private land, and out of sight of the Toomelah community
- ▶ Rail corridor and private land boundaries would all be fenced.

Toomelah residents have also 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 that would reduce noise disturbances for people with autism. Potentially, measures 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.

The North Star community will experience a variety of impacts relating to the location of the laydown area and accommodation camp, including increased traffic, additional noise sources, increased numbers of non-local workers (refer Section 23.5.1.1) anxiety about safety or security. Sequential construction of Narrabri to North Star and the proposal could result in up to four years' construction activity in the North Star area, with increased heavy traffic, large numbers of non-local workers and changes to the village's character due to the presence of laydown areas and the workforce accommodation camp. Consultation with the North Star community will identify initiatives that will assist them to cope with the changes and realise a long-term community benefit from the proposal.

Safety risks associated with the proposal's operation include derailments, level crossing accidents with road-based vehicles, accidents associated with pedestrian and cyclist crossings, and railway-based suicide.

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 operation, and discuss how the rail safety program can be tailored for Toomelah.

ARTC will apply best practice design and management measures to mitigate community safety impacts and will develop tailored rail safety awareness programs for nearby communities. As noted in Section 23.5.1.7, ARTC is working with emergency services to develop measures to address potential impacts on emergency services and service response times during construction and operation.

Employment opportunities during construction are likely to support the wellbeing of the 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.

Potential impacts to health and wellbeing are outlined in Table 23.20.

TABLE 23.20 POTENTIAL IMPACTS TO HEALTH AND WELLBEING

Impact area	Delivery phase	Potential impacts
Support for community wellbeing	Operation	The proposal represents a positive contribution to regional community wellbeing by increasing employment opportunities for up to 350 construction personnel and up to 20 operation personnel, which will support family wellbeing.
Mental health	Construction and operation	<p>There is potential for stress related to proposal uncertainties or impacts to affect the mental health of some people, particularly those who live in proximity to the study area.</p> <p>There is also potential for changes to the environment near Toomelah to contribute to stress and/or mental illness. Land holders and Toomelah residents are also anxious about the proposal's potential for the to exacerbate flood risks.</p>
Emergency services	Construction	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 level crossings
	Operation	Emergency services may be delayed at level crossings by approximately two minutes at each crossing, resulting in increased emergency service response times.
Toomelah community wellbeing	Operation	Potential exists for people to access the rail line, increasing the opportunity for rail suicide or accidents due to risk taking behaviour. With Toomelah an extremely vulnerable community, this is a particular concern as identified in consultation. The rail line would be fenced and elevated from approximately 2.7 km southwest of Toomelah with the abutment located on fenced private land, which would reduce but not eliminate the risk of people from Toomelah accessing the corridor.
	Construction and operation	The proposal's construction and operation will be a significant change for the community of Toomelah to deal with in a short space of time, particularly in the context of a lack of familiarity with major construction and freight rail lines. There may also be temporary travel delays while construction works are occurring near/over Tucka Tucka Road.
	Construction and operation	The proposal has a significant opportunity to improve community wellbeing in Toomelah through employment, training and community development.
	Construction and operation	Toomelah community members have identified potential for construction noise or rail noise to affect the wellbeing of people on the autism spectrum.
North Star community wellbeing	Construction	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 Inland Rail Project. This may cause stress or disrupt community activities. Laydown areas and associated traffic may also engender anxiety about traffic safety or security.
Air quality	Construction	The results of air quality risk assessment for the proposal (Appendix L: Air Quality Technical Report) indicate that the unmitigated air emissions from the construction phase of the proposal pose a low risk of human health impacts but a medium risk of dust soiling, requiring that suitable management measures to control dust must be implemented during construction.
	Operation	Air quality assessment for the proposal's operation concluded that forecast concentrations are predicted to be lower than the proposal goals at all identified sensitive receptor locations, except for the annual criterion for PM2.5. However, due to the elevated background monitoring data used it is expected that actual concentrations will be compliant at all sensitive receptor locations.

Impact area	Delivery phase	Potential impacts
Traffic safety	Construction	Assessment of traffic and transport impacts (refer Chapter 20: Traffic and Transport) 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, with potential to worsen levels of service. 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.
Rail corridor safety	Operation	Toomelah residents have expressed concern about young people being bored and engaging in high-risk behaviour late at night and the opportunity for suicide. The nearest rail crossing to Toomelah and Boggabilla would be grade separated, avoiding the risk of collisions. Other safety risks associated with the proposal's operation include derailments, level crossing accidents with road-based vehicles, and railway-based suicide.
Benefits of decommissioning	Decommissioning	Benefits of decommissioning would include removal of potential traffic safety hazards, the risk of rail suicide, demand on emergency services and impacts on amenity.

23.5.1.9 Cumulative social 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).

At the local level, the only likely cumulative impacts would be in North Star, sequential construction of Inland Rail's North Star to Narrabri project and the proposal could 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 a number of Inland Rail projects and/or other major projects in South East Queensland. Assessment of these impacts would be speculative at best, as construction personnel are highly mobile, but a requirement for up to several thousand construction personnel may be experienced in the northern NSW/southern Queensland regions from 2021 to 2024. If multiple projects are constructed in the same timeframe, there may be a significant demand 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.

23.5.2 Social benefits and opportunities

23.5.2.1 Construction

The proposal represents a positive contribution to the regional community by increasing employment opportunities for up to 350 construction personnel and up to 20 operation personnel, which may support mental health by enabling financial and housing security, self and family care, and social connections.

The industrial and consumption effects of the proposal will result in the creation of indirect jobs both due to upstream and downstream linkages between the proposal's activities and the rest of the economy, such as 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). The regional economic modelling results (Appendix I: Economic Assessment Technical Report, Section 5.4) 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.

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 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 therefore business trading levels in the proposal region. The North Star Sporting Club and Wobbly Boot Hotel may also experience increased trade from construction personnel.

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

The proposal has a significant opportunity to improve community wellbeing in Toomelah. Prior experience of the Community Development Employment Program 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. ARTC will cooperate with the Toomelah–Boggabilla LALC to identify how ARTC's investments in local communities can support wellbeing in Toomelah, e.g. through training and employment pathways.

23.5.2.2 Operation

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

- ▶ Potential for proposal region residents including Aboriginal People 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 constructed for the camp 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 Inland Rail, a program that will make a strong contribution to regional, state and national development for up to 100 years. Inland Rail benefits supporting 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.

Inland Rail would also likely lead to removing approximately 200,000 truck movements from Australian roads each year, resulting in improved road safety and a reduction in carbon production of 750 000 tonnes per annum.

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.

23.5.3 Economic impacts

23.5.3.1 Economic benefits assessment

An economic benefits assessment has been undertaken to identify and assess the likely benefits of the proposal, as a discrete project, to the community. These economic benefits have been estimated based on the impacts of the proposal on the transport network, in particular freight operators, along with the benefits accrued by non-users (the community). Where the proposal improves the transport connectivity and efficiency between freight originators and destinations, these movements across road and rail have been assessed in the appraisal. The appraisal period is 50 years.

The results of the economic benefits assessment estimate that the proposal is expected to provide a total of \$65.72 million in incremental benefits (at a 7 per cent discount rate). This consists of \$52.51 million in freight benefits and \$13.21 million in community benefits.

Observing the composition of benefits, the largest share of benefits for the proposal is freight operating cost savings, representing approximately 37 per cent of the total benefits (at a 7 per cent discount rate). This is consistent with the analysis for *Inland Rail Program Business Case*, where operating cost savings were approximately 39 per cent of the total benefits.¹

Freight benefits more broadly (including freight time travel savings, operating cost savings, as well as improved reliability and availability) represent approximately 80 per cent of the total projected benefits for the proposal.

Reductions in environmental externalities (i.e. air pollution and greenhouse gas emissions) from reduced heavy vehicle kilometres travelled represents approximately 8 per cent of the total benefits (at the 7 per cent discount rate).

The results of the economic benefits assessment are presented in the table below, with further detail available in Appendix I: Economic Impact Assessment Technical Report.

TABLE 23.21 ECONOMIC BENEFITS ASSESSMENT (\$2019)

Benefits	Discount rate		
	4%	7%	10%
Freight benefits	\$108.11 m	\$52.51 m	\$29.72 m
Travel-time savings	\$6.80 m	\$3.20 m	\$1.76 m
Operating cost savings	\$45.11 m	\$24.01 m	\$14.66 m
Improved availability	\$43.76 m	\$19.46 m	\$10.08 m
Improved reliability	\$12.44 m	\$5.84 m	\$3.22 m
Community benefits	\$24.35 m	\$13.21 m	\$8.19 m
Crash reduction	\$3.34 m	\$1.81 m	\$1.12 m
Environmental externalities	\$9.71 m	\$5.27 m	\$3.27 m
Road decongestion benefits	\$11.30 m	\$6.13 m	\$3.80 m
TOTAL BENEFITS	\$132.46 m	\$65.72 m	\$37.91 m

23.5.3.2 Cost–benefit analysis: Inland Rail Program Business Case

Due to the nature of the incremental assessment approach adopted, a proposal-specific cost–benefit analysis has not been undertaken as the results will not capture the full impact expected to be delivered on completion of the Inland Rail Program. Instead, the results of the economic analysis undertaken for the *Inland Rail Program Business Case* are provided to illustrate the anticipated net economic impact of the Inland Rail Program to the community as a whole.

The results of this analysis, as presented in the *Inland Rail Program Business Case*, are shown in Table 23.22.

TABLE 23.22 ECONOMIC APPRAISAL RESULTS FOR INLAND RAIL (\$2015)

	Net present value	Benefit–cost ratio
Present value at 4% discount rate	\$13,928 m	2.62
Present value at 7% discount rate	\$116.1 m	1.02

Source: *Inland Rail Program Business Case* (ARTC, 2015)

The cost–benefit analysis results indicate that Inland Rail is estimated to be economically viable, with an economic benefit–cost ratio of 1.02 at a 7 per cent discount rate (2.62 at a 4 per cent discount rate). By beneficiary, inter-capital freight users account for approximately 68 per cent of total benefits, followed by regional freight (16 per cent). A further 13 per cent of benefits accrue to the broader community.

1. \$2015 present value at 7 per cent discount rate; assumes Western Line upgrades.

23.5.3.3 Regional impact analysis

A regional impact analysis has been undertaken to highlight the economic impacts of the proposal on the regional, state and national economy using an equilibrium modelling framework.

As described above, the regional economy is represented by the New England North West labour market region (NewEngNthWst region).

Key considerations

The direct and indirect economic impacts of the proposal during its construction phase are modelled using a comparative-static version of KPMG-SD. In comparative static mode, KPMG-SD does not trace out the dynamics of how the economy adjusts through time to accommodate the construction of the proposal. Rather, in comparative static mode, KPMG-SD provides estimates of how the economy is impacted over the construction phase period, during which the proposal's capital expenditure program is completed.

Under this configuration, KPMG-SD provides two snapshots of the structure and size of the economy for the proposal:

- ▶ The first snapshot is the baseline representation of the economy. For the construction phase, the baseline is a representation of the size and structure of the economy before the capital expenditure program associated with the proposal's rail development commences.
- ▶ The second snapshot is a revised representation of the economy that includes the impacts of the proposal. For the construction phase, this revised snapshot is a representation of the economy during the expenditure of the capital expenditure program associated with the development of the proposal.

Regional impact analysis results: construction phase

The headline impacts of the proposal on the regional economic catchment (NewEngNthWst region) during the construction phase are summarised in the table below. Further detail is provided in Appendix I: Economic Assessment Technical Report.

TABLE 23.23 SUMMARY OF THE ECONOMIC IMPACTS OF THE PROPOSAL ON THE NEWENGNTHWST REGION OVER THE CONSTRUCTION PHASE

Measure	Slack labour markets	Tight labour markets
Additional real gross regional product (\$2018)	\$79 m	\$41 m
Additional employment (persons)	448	75

Source: KPMG computations

At the end of the construction phase, real gross regional product for the NewEngNthWst region is projected to be \$79 million higher than the baseline level under the assumption of slack labour markets. This increase is almost halved if labour markets are assumed to be tight (\$41 million) as a redistribution of employed workers to higher value-adding jobs is less beneficial in gross state product (value adding) terms than an increase in the number of workers employed.

The importance of the labour market assumption is reflected in the employment results. In the scenario with slack labour markets, the construction phase of proposal generates an additional 448 jobs in the NewEngNthWst region (direct and indirect employment). With tight labour markets, the increase in jobs is significantly less at just 75 jobs. Under tight labour markets wages are bid up to attract currently employed workers to the construction businesses contracted to construct the proposal. That is, the labour market response is dominated by workers moving from their current job to a higher paying job. With slack labour markets there are sufficient unemployed and underemployed workers to accommodate the increase in demand for labour without increasing real wages.

It is likely that the labour market conditions that will prevail during the construction phase of the proposal will be somewhere between those characterised by the slack and tight labour market scenarios. Among other factors, this will be determined by cumulative and competing demand for trades and construction labour resulting from concurrent construction periods for infrastructure projects occurring in the adjacent or surrounding areas.

Recent labour market trends can be used to inform workforce capacity and capability within the local region. Assuming that labour market conditions do not change materially, it is reasonable to assume that the regional labour market has the capacity to supply a significant portion of the workforce requirements of the proposal, without major disruption. Based on the industry of employment and occupation of the local workforce, it can be broadly assumed that the labour force has the appropriate skills and knowledge to support the proposal.

Due to the dynamic nature of local and regional labour markets, ARTC has identified that an analysis of the likely availability of construction labour from the region will be undertaken prior to construction, to enable the refinement of local and regional recruitment and training strategies to maximise employment opportunities within local economies.

23.6 Social and economic impact management

23.6.1 Introduction

The EIS includes detailed measures to mitigate and monitor environmental impacts that may result in social impacts. These strategies are summarised in Chapter 27: Environmental management plan and detailed in the respective EIS chapters and appendices.

The SIA (refer Appendix O: Social Impact Assessment Technical Report) includes a SIMP, which 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 outlines the objectives, outcomes, performance measures and actions that will be undertaken within five sub-plans for:

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

Collectively, the five sub-plans are designed to:

- ▶ Mitigate the proposal's social impacts on local communities and stakeholders
- ▶ Maximise local employment and business opportunities
- ▶ Ensure that opportunities associated with the proposal deliver long-term benefits for local communities.

Actions that address economic benefits are referenced in Appendix I: Economic assessment.

If the proposal is approved, it will undergo a detailed design phase which may result in changes to social impacts, for example:

- ▶ 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 the SIMP.

ARTC will have dedicated personnel to implement the SIMP and will work with its construction contractors and other stakeholders to detail the respective responsibilities of ARTC and other stakeholders, timing, stakeholders to be involved in each measure and performance monitoring during the detailed design phase.

ARTC will contract a company to construct the proposal and will extend relevant SIMP commitments to the proposal's primary contractors.

At the completion of the construction phase, a SIMP for 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 operation will be implemented during the first three years of operation. Any need for a SIMP following Year 3 of operation will be identified in consultation with the Department of Planning Infrastructure and Environment.

A SIMP monitoring framework is provided in Appendix O: Social Impact Assessment Technical Report.

23.6.1.1 ARTC responses to key issues

ARTC commitments which respond to key issues raised in consultation are summarised in Table 23.24. ARTC will continue to work with landowners, traditional custodians, councils, community members and key stakeholders to develop and refine its responses to community concerns.

TABLE 23.24 PROPOSAL RESPONSES TO KEY ISSUES

Impact area	Proposal responses
Severance and amenity impacts	<ul style="list-style-type: none"> ▶ Existing rail corridor used for 25 km to avoid direct impacts on private properties ▶ Macintyre River Viaduct designed to address risks to community safety through changes to flooding patterns or people accessing the rail corridor ▶ Working with property owners to ensure that a satisfactory level of access between adjoining properties is maintained, and to identify actions that will minimise or offset changes to connectivity or changes to water flows that affect their properties ▶ Consulting with landowners to identify specific measures that will reduce impacts on farm connectivity or amenity
Proposal alignment	<ul style="list-style-type: none"> ▶ ARTC's consideration of proposal alignment options is detailed in Chapter 3: Alternatives and proposal options. Chapter 8: Consultation describes the consultation process which occurred in relation to the proposal's alignment
Potential flooding impacts	<ul style="list-style-type: none"> ▶ 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
Local business opportunities	<ul style="list-style-type: none"> ▶ Development of Local Content Policy and strategy to ensure proposal supply opportunities are available to local businesses (within 125 km of the proposal) ▶ Identification of businesses within 125 km with potential capacity to supply the proposal.
Employment opportunities	<ul style="list-style-type: none"> ▶ Engagement with the Toomelah and Boggabilla communities, representative organisations and service providers to develop new local businesses ▶ Providing a clear and efficient process for people to seek information about employment opportunities and register their interest in Inland Rail.
Toomelah community safety and wellbeing	<ul style="list-style-type: none"> ▶ Providing a grade-separated crossing of Tucka Tucka Road ▶ Preventing access to the rail corridor to a distance of approximately 2.7 km from Toomelah ▶ Working with the Toomelah community and Government stakeholders to identify education and training pathways, and employment opportunities for Toomelah residents during and post construction ▶ Supporting Toomelah residents to develop businesses that will service the proposal and/or support long term employment outcomes.
North Star community impacts and benefits	<ul style="list-style-type: none"> ▶ Consultation with North Star residents regarding the proposed accommodation camp site and construction hours ▶ Inclusion of an access road within the proposal design to reduce traffic impacts past North Star Public School and in the village.
Community wellbeing	<ul style="list-style-type: none"> ▶ Consultation with landowners whose properties would be transected or bordered by the proposal to identify mitigation measures addressing impacts on farm management, access and residential amenity ▶ Engagement with North Star stakeholders and Gwydir Shire Council regarding plans for an accommodation construction camp in North Star ▶ Establishing and maintaining a Community Reference Group throughout construction, to include as a minimum landowners and residents from nearby communities, with future need for the Community Reference Group to be agreed with Community Consultative Committee members and DPIE following the conclusion of construction.

23.6.2 Community and stakeholder engagement

ARTC recognises that ongoing engagement with landowners, the Gomeroi People, communities 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.

The EIS includes detailed measures to mitigate and monitor environmental impacts that may result in social impacts. These strategies are summarised in the Environmental Management Plan (Chapter 27: Environmental Management Plan) and detailed in the respective EIS Chapters and Appendices.

Appendix O: Social Impact Assessment Technical Report provides an engagement framework, which addresses the proposal's detailed design, pre-construction and construction phases. The engagement framework will be further developed during the detailed design stage to provide a Community and Stakeholder Engagement Plan to guide and monitor engagement activities to the end of the construction phase.

The key stakeholders addressed by the engagement framework 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–Boggabilla LALC
- ▶ Gwydir Shire Council, Moree Plains Shire Council and Goondiwindi Regional Council
- ▶ Training providers in the proposal region
- ▶ 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.

Actions ARTC will undertake and/or require of its construction contractors as part of community and stakeholder engagement will support management of impacts on:

- ▶ Toomelah community's surroundings
- ▶ Rural amenity
- ▶ Emergency service access
- ▶ Amenity or use of agricultural properties
- ▶ Amenity and character of North Star.

At the completion of the construction phase, ARTC will develop a Community and Stakeholder Engagement Plan for the commissioning and operational phases, in line with ARTC's community and stakeholder engagement approach for Inland Rail, and including:

- ▶ Mechanisms for communication and cooperation with landowners and residents who are adjacent to the rail corridor or 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
- ▶ Provision of a timetable of train movements to nearby landowners and police and emergency services
- ▶ Complaints and feedback mechanisms.

The proposal's Community and Stakeholder Engagement Plan will be updated five yearly or as indicated by monitoring data (refer Appendix O: Social Impact Assessment Technical Report).

A complaints and feedback procedure is also provided in Appendix O: Social Impact Assessment Technical Report.

23.6.3 Workforce management

Construction of the proposal is expected to offer up to 350 jobs during 2021 to 2025.

One of ARTC's primary aims is to maximise employment opportunities for SIA study area residents, by:

- ▶ Facilitating skills development opportunities through the Inland Rail Skills Academy to build regional capacity in construction and rail, which will enable 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
- ▶ Requiring primary construction contractors to employ locally, and to implement workforce training and diversity strategies.

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. The partnerships and projects that make up the Inland Rail Skills Academy are in progress, with aims to commence some activities in late 2020 and a more comprehensive program in 2021.

The availability of construction labour changes rapidly in response to the cumulative impacts of major projects across Australia. ARTC is undertaking a skills audit to identify the types of skills it requires as the basis of engaging with training partners. 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.

Consultation identified that a number of Toomelah residents have qualifications that are relevant to the proposal's construction. Similarly, qualified local people are likely to be living in Boggabilla and Goondiwindi. ARTC will work closely with local communities to **strengthen community members' capacity for employment, encourage applications and increase the number of Aboriginal People applying for proposal-related jobs.**

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.**

Appendix O: Social Impact Assessment Technical Report (Section 8.3) summarises the proposal's workforce management plan.

23.6.4 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 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.**

As noted in Section 23.5.1.3, the construction workforce accommodation camp is proposed for land 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.

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.

Appendix O: Social Impact Assessment Technical Report (Section 8.4) outlines measures proposed to mitigate the impacts of the proposed construction accommodation camp. Consultation with the North Star community regarding the accommodation camp is ongoing and will identify any additional specific issues to be addressed as part of the Accommodation Camp Management Plan, which will be a sub-plan to in the proposal's Construction Environmental Management Plan.

Appendix O: Social Impact Assessment Technical Report also addresses the potential for a positive legacy for the North Star community. This would have benefits for local residents, visitors to North Star, community events, and tourists.

Directly affected landowners have raised concerns that the proposal could affect property values. 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.

23.6.5 Health and wellbeing

ARTC will undertake or require its construction contractors to undertake a range of measures that address potential impacts on community health and wellbeing. In addition to implementing the proposal's construction environmental management plan, ARTC commitments include:

- ▶ Maintain a focus on creating a safe environment for all and supporting community wellbeing during the changes that Inland Rail will bring
- ▶ Identify impacts and opportunities that have the potential to impact community wellbeing and developing, in consultation with the local community, appropriate programs or initiatives to address these
- ▶ Identifying opportunities and developing programs to improve safety outcomes for local communities, including the potential exacerbation of complex social and health problems in Toomelah
- ▶ Entering into a mental health partnership with a suitable provider at a program level, which will include culturally appropriate services available to Aboriginal community members (this has been initiated)
- ▶ Ongoing engagement with Aboriginal communities, families and Elders to support Aboriginal employees, underpinned by a high level of coordination between contributing programs and agencies.

Consultation with the Toomelah community has commenced with respect to support for community and business development programs, and education, training and employment participation programs, which will ensure Toomelah and Boggabilla residents benefit from the proposal's **opportunities**.

Consultation with North Star Public School and Department of Education is also ongoing 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.

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.

ARTC will also continue engagement to confirm mitigations (such as cooperative responses to accidents or emergencies involving the proposal) with the NSW Police, Ambulance and Fire and Rescue Services, and the Queensland Police, Ambulance and Fire and Emergency Services.

23.6.6 Local business and industry participation

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 will implement Inland Rail's Sustainable Procurement Policy for the proposal, providing details on opportunities, targets and strategies for local and Indigenous business participation in the proposal's construction and operation phases. For the purposes of the proposal's procurement strategy, ARTC will establish, focus and report on tiered levels for supplier participation at the following levels:

- ▶ Local community: referring to spend within the proposal region, with a focus on communities near the study area
- ▶ Regional: referring to spend with businesses located within LGAs within which the proposal is located
- ▶ State: referring to spend within New South Wales
- ▶ 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 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 Local Industry Participation Plan. As part of implementing the Local Industry Participation Plan, 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.

To assist local businesses to secure supply contracts and encourage businesses to locate to the region, ARTC will:

- ▶ Implement the Sustainable Procurement policy to maximise local industry opportunities
- ▶ Undertake industry briefings to prepare industry for future opportunities
- ▶ Communicate the pre-qualification requirements for contracts ahead of time to allow businesses to achieve relevant requirements
- ▶ Work with relevant regional economic development bodies to encourage relevant supply chain development, especially for Indigenous businesses
- ▶ Encourage contractors to set appropriate targets and/or incentives to utilise local sub-contractors and Indigenous businesses as much as possible
- ▶ Advertise procurement opportunities widely in relevant forums
- ▶ Allow local businesses to form joint ventures to tender for work.

To assist in minimising the potential economic impacts associated with property impacts, ARTC commits to developing and implementing a property management strategy that will provide the framework for the development of individual property management agreements.

All acquisitions of private land would be undertaken in accordance with the requirements of the *Land Acquisition (Just Terms) Compensation Act 1991*. 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 has provided information about the proposal to investors interested in opportunities facilitated by the proposal, and will continue this communication during the construction phase.

23.6.7 Economic impact management

ARTC will have regard to the NSW Government's Infrastructure Skills Legacy Program targets, and in support of this commits to:

- ▶ Skills and up-skilling opportunities would be provided to ensure that training and apprentice/trainee development are encouraged by the proposal, subject to regulatory and associated restrictions
- ▶ Workforce management plan including an indigenous participation plan
- ▶ Engaging with local businesses and residents to investigate options for providing flexible working arrangements
- ▶ Working with local businesses to secure supply contracts and encourage new businesses to locate to the region.

Under tight labour market conditions, wages offered by the proposal would be higher, which would result in some difficulties for other sectors to attract and retain workers. Under these conditions, ARTC, the Australian Government, the NSW State Government and local governments would work together to develop strategies to appropriately manage the likely draw of labour to the proposal.

23.6.8 Monitoring and reporting

The purpose of SIMP monitoring is to:

- ▶ Track and enable reporting on delivery of measures which mitigate social impacts or increase community benefits
- ▶ Ensure that mitigation and benefit enhancement measures are effective, and/or support identification of corrective actions to improve their effectiveness.

Appendix O: Social Impact Assessment Technical Report provides a monitoring framework that 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 that will support community wellbeing.

Monitoring data on delivery of the SIMP will be reported at each of the proposal's Community Reference Group meetings (as available), and a report against performance measures and social indicators will be presented to the proposal region councils and the Community Reference Group annually.

The monitoring program will be reviewed prior to operation, and then implemented for operation, and revised if necessary, at five-yearly intervals.

23.6.9 Social Impact Management Plan reviews

ARTC will track implementation of the SIMP 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 by the end of the first year of construction, prior to commissioning of the proposal, and again during Year 3 of operation. 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 that need to be made to the SIMP to ensure ongoing effectiveness. The results of these independent reviews will be made available via Inland Rail's website and local communication channels e.g. through the Toomelah-Boggabilla LALC.

As noted in Section 23.6.1, any need for a SIMP after Year 3 of operation will be identified in consultation with the Department of Planning Infrastructure and Environment.

23.7 Impact assessment

This section summarises the results of the SIA's risk assessment, including:

- ▶ Potential pre-mitigation significance of social impacts and benefits
- ▶ ARTC's commitments and proposal-specific mitigations
- ▶ Risk of residual impacts after mitigations are applied.

Table 23.25 provides the risk assessment ratings.

TABLE 23.25 RISK ASSESSMENT RATINGS

Likelihood		Consequence level				
		1 Minimal	2 Minor	3 Moderate	4 Major	5 Catastrophic
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 impact ratings						
	Low		Moderate		High	Extreme
	Proposal benefits and opportunities					

Source: NSW DP&E, 2017

Proposal phases are noted as:

- ▶ Construction (C), which includes pre-construction
- ▶ Operation (O)
- ▶ Decommissioning (D)
- ▶ C&O, denoting impacts that commence in construction and continue for the proposal's life.

The likelihood of social impacts and opportunities occurring has been assessed with reference to the social baseline (e.g. findings regarding community vulnerabilities), EIS technical findings and stakeholder inputs.

'Consequence' as defined in Table 23.26, has been assessed based on how the social impact may be experienced by the relevant stakeholders, and considers the duration of impacts and benefits, sensitivity, including stakeholders' specific vulnerabilities and resilience to impacts, the severity of potential effects on stakeholders, and the magnitude of potential benefits.

TABLE 23.26 CONSEQUENCE CRITERIA

Rating	Impact (-)	Benefit (+)
Minimal	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.
Minor	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.
Moderate	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.
Major	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.
Catastrophic	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 *Social impact assessment guideline* (DSDIP, 2017).

Table23.27 summarises:

- ▶ Potential social impacts and benefits as a result of the proposal
- ▶ Potentially affected or benefitted stakeholders
- ▶ Preliminary evaluation of the risk of potential impacts and benefits, considering ARTC's existing commitments as outlined in Appendix O: Social Impact Assessment Technical Report
- ▶ Proposal-specific management measures
- ▶ An evaluation of residual risks, in consideration of proposal-specific management measures.

As per the SIA Guideline, the significance of the social impact or benefit has been viewed from the perspective of those expected to be affected, (based on stakeholder input provided during consultation and in consideration of the outcomes of impact assessment for this SIA and other EIS studies).

TABLE23.27 IMPACT ASSESSMENT SUMMARY

Impact area	Potential impacts	Phase	Nature	Stakeholders affected	Significance	Mitigations	Residual significance
Surroundings							
Settlement pattern	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 that 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
Amenity	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

Impact area	Potential impacts	Phase	Nature	Stakeholders affected	Significance	Mitigations	Residual significance
Amenity (continued)	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. Ongoing engagement with affected landowners and development of property-specific mitigation measures for directly affected landowners in the greenfield section.	B2
	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 measures as provided in 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 Railway Noise and Vibration Assessment.	A2
Local character	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

Impact area	Potential impacts	Phase	Nature	Stakeholders affected	Significance	Mitigations	Residual significance
Local character (continued)	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
	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 Railway Noise and Vibration Assessment. Support for community initiatives to offset loss of character and amenity in North Star.	A2
Connectivity and travel delays	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 2 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

Impact area	Potential impacts	Phase	Nature	Stakeholders affected	Significance	Mitigations	Residual significance
Access to natural resources	The Toomelah community's access to remnant forest areas along the 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	A4	Support for development of community initiatives to offset loss of native vegetation currently used by Toomelah community and create jobs pathways to benefit local young people.	A2
	There is potential for earthwork cuttings to intersect shallow aquifers, which is predicted to result in a net loss in groundwater supply for one property owner.	C	-	Property owner	C3	Property-specific agreement, which includes groundwater monitoring and make good arrangements if net water supply loss is anticipated/identified.	C2
Access to natural resources	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

Impact area	Potential impacts	Phase	Nature	Stakeholders affected	Significance	Mitigations	Residual significance
Personal and property rights							
Farms and agricultural land	The proposal will require acquisition of agricultural land and has potential to isolate farm infrastructure, reduce stock access across the rail corridor 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 operation.	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
Property values	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 environmental management plan and approval conditions. Property-specific agreements addressing loss of land. Communication with landowners and community members regarding environmental management strategies.	A2
Concern about flooding	Assessment of the proposal's potential to affect flooding patterns (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 Goondiwindi Regional Council Moree Plains Shire Council Gwydir Shire Council	B3	Provide detailed information about the results of flood modelling to residents, councils and landowners.	B2

Impact area	Potential impacts	Phase	Nature	Stakeholders affected	Significance	Mitigations	Residual significance
Community and Culture							
Toomelah community identity and functions	The Macintyre River Viaduct has the potential to act as a visual barrier that may increase Toomelah's perceptions of social isolation, but would 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
North Star community size and character	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 Gwydir Shire Council	A3	Early engagement with North Star Primary School, Department of Education, Gwydir Shire Council, North Star Sporting Club committee and North Star residents regarding measures to reduce impacts on village character.	B2
Community cohesion	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, the Gomerioi People, and landowners	B3	Investment in local communities with a focus on programs and services that 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
Recreation	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

Impact area	Potential impacts	Phase	Nature	Stakeholders affected	Significance	Mitigations	Residual significance
Employment							
Construction employment	Construction will require up to 350 personnel, a proportion of whom would be drawn from the proposal region. ARTC's intention to require jobs to be advertised locally will ensure benefits are derived from local employment. 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
Labour availability	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 Department of Infrastructure, Transport, Cities and Regional Development of intended construction personnel ramp-up.	B2
Operation employment	A workforce of approximately 15 to 20 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
	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
Impacts of decommission	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
Business and industry							
Local and regional supply to proposal	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 to businesses in the proposal region regarding construction program and business capacity building programs available as part of Inland Rail Skills Academy.	B3

Impact area	Potential impacts	Phase	Nature	Stakeholders affected	Significance	Mitigations	Residual significance
Agricultural businesses	Road works would disrupt farms' connectivity to markets 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
Tourism	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
	The 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
Transport and logistics businesses	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 operation, 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

Impact area	Potential impacts	Phase	Nature	Stakeholders affected	Significance	Mitigations	Residual significance
Regional development	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.	0	+	Businesses in the proposal region Councils ARTC Department of Infrastructure, Transport, Cities and Regional Development	C3	N/A	C3
Housing and accommodation							
Accommodation camp	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
	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.	0	+	North Star community, North Star Sporting Club and GSC	C2	Engage with North Star community, North Star Sporting Club and GSC regarding legacy project.	C3
Access to services and infrastructure							
North Star Primary School	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, Gwydir Shire Council to discuss environmental controls and mitigation measures.	C3

Impact area	Potential impacts	Phase	Nature	Stakeholders affected	Significance	Mitigations	Residual significance
Emergency services capacity	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 Rural Fire Services, 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 Fire & Rescue Services	B4	Provision of information about train schedules and cross-corridor access to emergency services	B3
Waste management	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	-	Gwydir Shire Council North Star community	A3	Consultation with Gwydir Shire Council.	A2
Health and wellbeing							
Support for community wellbeing	The proposal represents a positive contribution to community wellbeing by increasing employment opportunities for up to 350 construction personnel and approximately 20 operation personnel.	C/O	+	Proposal region construction personnel jobseekers and families	A2	Requirement for contractors to advertise jobs locally. ARTC Inland Rail Skills Academy.	A2
Mental health	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

Impact area	Potential impacts	Phase	Nature	Stakeholders affected	Significance	Mitigations	Residual significance
Toomelah community wellbeing	There is concern for children on the autism spectrum in Toomelah who may be affected by construction noise or rail noise.	C/O	-	Toomelah community Toomelah–Boggabilla LALC	A4	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' connections 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.	B3
Toomelah community wellbeing	Potential exists for people to access the rail corridor where it is at grade south-west of Toomelah, increasing the opportunity for rail suicide and risky behaviour.	O	-	Toomelah community Toomelah–Boggabilla LALC NSW Health	B5	Proposal fenced and elevated to be inaccessible from approximately 2.7 km south-west of Toomelah with the abutment located on fenced private land. Dedicated community development and employment programs to address causes of mental health issues. Safety programs addressing risky behaviour.	C5
	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
North Star community wellbeing	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 Gwydir Shire Council 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
Rail corridor safety	Safety risks associated with the proposal's operation include derailments and level crossing accidents.	O	-	Proposal region communities Councils NSW Police	C5	Support for road and rail safety awareness programs. Protocols with police and emergency services.	D5

Impact area	Potential impacts	Phase	Nature	Stakeholders affected	Significance	Mitigations	Residual significance
Cumulative impacts							
Local businesses	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
North Star community impacts	Sequential construction of Narrabri to North Star Inland Rail Project 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 the character of the village. 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
Labour supplies	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, farmers and businesses.	C3	Cooperate with local high schools, training and employment organisations to develop pathways to proposal employment for local people.	C2

23.8 Conclusions

23.8.1 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 to the projects. The proposal will require extensive construction works, with potential for impacts on directly affected landowners, adjacent landowners, other residents, 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 accommodation camp and laydown areas, and potential for increases in traffic and/or noise related to the cumulative effects of the proposal and Narrabri to North Star section of Inland Rail. 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 near the viaduct, 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 experience extreme disadvantage, they have specific vulnerabilities to risks, such as self-harm and high-risk behaviour in relation to the rail corridor. The proposal includes design measures that 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 potential for Toomelah to obtain short-term 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 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, because 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 that 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.

There is also the likelihood of a long-term impact on Aboriginal People's connection to the Macintyre River and Toomelah's visual connections to the west of the community.

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

23.8.2 Residual risks

Residual risks are identified in Table 23.28. 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 that 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 operation, 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 that may lead to accidental death, which is of particular concern in the disadvantaged community of Toomelah located approximately 2 km from the study area. Proposal design measures that will reduce this risk are shown in Table 23.28.

A second risk that was identified as extreme is that the Macintyre River Viaduct has the potential to act as a visual barrier which may increase **Toomelah's** perceptions 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, together with rail noise and loss of remnant vegetation near Toomelah, have potential to harm **the community's** 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.

The assessment of socio-economic impacts identified the extreme residual risks shown in Table 23.28.

TABLE 23.28 RESIDUAL ASSESSMENT RATINGS

Environmental Value	Potential impact	Residual risk/significance	Measures addressing residual risk
Toomelah community wellbeing	Potential exists for people to access the rail corridor where it is at-grade and therefore for rail suicide and risky behaviours. For Toomelah, which is a disadvantaged community that has experienced high rates of premature deaths including suicides and accidental deaths, and is approximately 2 km from the proposal, this is a particular risk.	Extreme	<p>Proposal design measures to reduce the risk include:</p> <ul style="list-style-type: none"> ▶ 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 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. <p>ARTC will work with the Toomelah–Boggabilla LALC and community organisations to support community initiatives that address the causes of mental health issues in Toomelah, and with training providers to strengthen training and employment pathways for local Aboriginal young people. ARTC will also ensure that rail safety education programs are culturally appropriate for Aboriginal residents.</p>
	Changes to Toomelah's surroundings 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.	Extreme	<p>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.</p> <p>ARTC will 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.</p>

23.8.3 Benefits of the proposal

The benefits of the Proposal that are almost certain or likely, and of moderate or high consequence, include:

- ▶ Construction will require up to 350 personnel, some of whom would be drawn from the proposal region. The opportunity for up to two years' 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 would be created for operational personnel.
- ▶ Stimulation of indirect employment growth would occur through related investments in infrastructure, freight terminals and related businesses.
- ▶ Opportunities for local/regional supply to the proposal would be created, 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.