APPENDIX R

INLAND RAIL

Social Impact Assessment Technical Report

CALVERT TO KAGARU ENVIRONMENTAL IMPACT STATEMENT

IR_1381

ARTC

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

INLAND RAIL CALVERT TO KAGARU
APPENDIX R
SOCIAL IMPACT ASSESSMENT TECHNICAL REPORT

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SOCIAL PLANNING SOLUTIONS

Inland Rail: Calvert to Kagaru

Social Impact Assessment

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Abbreviations

ABS	Australian Bureau of Statistics
ACH Act	*Aboriginal Cultural Heritage Act 2003* (Qld)
AEP	Australian Exceedance Probability
AIPP	Australian Industry Participation Plan
AL Act	*Acquisition of Land Act 1967* (Qld)
AMP	Accommodation Management Plan
ARTC	Australian Rail Track Corporation
B2G	Border to Gowrie project
C2K	Inland Rail Calvert to Kagaru (the Project)
CCC	Community Consultative Committee
CEMP	Construction Environmental Management Plan
CHMP	Cultural Heritage Management Plans
CNVMP	Construction Noise and Vibration Environmental Management Plan
CRG	Community Reference Group
CRR	Cross River Rail
CYMHS	Child and Youth Mental Health Service
DATSIP	Department of Aboriginal and Torres Strait Islander Partnerships
Db(A)	Decibel levels weighted to approximate the way the human ear hears
DCDSS	Department of Communities, Disability Services and Seniors
DESBT	Department of Employment Small Business and Training
DESE	Department of Education, Skills and Employment
DESSFB	Department of Employment, Skills, Small and Family Business
DET	Department of Education and Training
DHPW	Department of Housing and Public Works
DITRDC	Department of Infrastructure Transport Regional Development and Communications
Draft OEMP	Draft Outline Environmental Management Plan
DSDMIP	Department of State Development Manufacturing Infrastructure and Planning
DTMR	Department of Transport and Main Roads
DVO	Domestic violence order
EIS	Environmental Impact Statement
EP Act	*Environmental Protection Act 1994* (Qld)
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Cwth)
FTE	Full time equivalent
GP	General practitioner
H2C	Helidon to Calvert project
ha	Hectare
HACC	Home and Community Care
ICC	Ipswich City Council
IEO	Index of Education and Occupation

iGO	City of Ipswich Transport Plan
IRCEC	Ivory's Rock Convention and Events Centre
IRSAD	Index of Relative Socio-Economic Advantage and Disadvantage
IS	Infrastructure Sustainability
K2ARB	Kagaru to Acacia Ridge and Bromelton project
km	kilometre
LGA	Local Government Area
LVIA	Landscape and visual impact assessment
m	metre
OCG	Office of the Coordinator-General
P&C	Parents and Citizens Association
PCNP	Principal Cycle Network Plans
PDA	Priority Development Area
PHIDU	Population Health Information Data Unit
PHN	Primary Health Network
PM	Particulate Matter
QAS	Queensland Ambulance Service
QFES	Queensland Fire and Emergency Service
QGSO	Queensland Government Statistician's Office
QLD	Queensland
QPS	Queensland Police Service
QR	Queensland Rail
REC	Regional Economic Clusters
RIA	Regional Industrial Area
RSIS	Regional Skills Investment Scheme
SA1	Statistical Area 1
SA2	Statistical Area 2
SA4	Statistical Area 4
SDA	State Development Area
SEIFA	Socio-Economic Indexes for Areas
SFRC	Southern Freight Rail Corridor
SIA	Social Impact Assessment
SIMP	Social Impact Management Plan
SQW	Skilling Queenslanders for Work
SRRC	Scenic Rim Regional Council
SSC	State Suburb
SSRC Act	*Strong and Sustainable Resource Communities Act 2017* (Qld)
the Project	Inland Rail Calvert to Kagaru
TI Act	*Transport Infrastructure Act 1994* (Qld)
TMP	Traffic Management Plan

ToR	Terms of Reference
UQ	University of Queensland
USQ	University of Southern Queensland
VET	Vocational Education and Training
WHO	World Health Organisation

Summary

This Social Impact Assessment (SIA) has been prepared as part of the Calvert to Kagaru (C2K) Project's Environmental Impact Statement (EIS). The purpose of the SIA is to identify how the Project may affect local and regional communities, and how Australia Rail Track Corporation (ARTC) and its contractors will work with stakeholders to enable mitigation of negative social impacts and enhancement of Project benefits.

The Project is a 'greenfield' (new rail corridor) project and is one of the 'missing links' within the Inland Rail Program. It will generally be located within the existing Southern Freight Rail Corridor (SFRC), which was gazetted in November 2010 as future railway land under Section 242(1) of the *Transport Infrastructure Act 1994* (Qld) (TI Act). The Project connects to Inland Rail's Helidon to Calvert (H2C) project, and to the Kagaru to Acacia Ridge and Bromelton (K2ARB) project which proceeds north-east to Brisbane's major intermodal terminal at Acacia Ridge.

SIA study area

The Project commences approximately 1.8 kilometres (km) west of the village of Calvert within the Ipswich Local Government Area (LGA) and ends in the rural locality of Kagaru in the Scenic Rim LGA.

The SIA study area includes:

- The disturbance footprint which refers to the rail corridor and associated infrastructure, and the temporary construction footprint, and is located within the EIS investigation corridor (extending approximately one km either side of the permanent disturbance footprint)
- Potentially affected communities which include the village of Calvert, the towns of Rosewood and Peak Crossing, and the localities of Lanefield, Lower Mount Walker, Ebenezer, Willowbank, Mount Forbes, Purga, Washpool, Woolooman, Undullah, Mutdapilly, Goolman, Kagaru and Allenview
- The Project region, which refers to the Ipswich and Scenic Rim LGAs.

The Project traverses the Logan LGA for approximately 300 metres (m) as it crosses Dugandan Creek and Wild Pig Creek Road reserve to the east of the Teviot Range, however material social impacts in the Logan LGA are not anticipated.

Community and stakeholder engagement

Project stakeholders include:

- Landholders in and near the disturbance footprint
- Community members (including landholders) and groups
- Ipswich City Council (ICC)
- Scenic Rim Regional Council (SRRC)
- Traditional owners and other Indigenous community members
- Community and Government agencies
- Businesses, including tourism businesses, and business organisations.

The SIA drew on the results of Australian Rail Track Corporation's (ARTC) stakeholder engagement with directly affected and nearby landholders, traditional owners, businesses, and community, environmental and economic groups. Additional SIA-specific engagement included:

- A community survey to identify community values and the residents' concerns about potential impacts

- Meetings with ICC and SRRC staff to discuss community concerns, vulnerabilities, potential social impacts and benefits, and mitigation and management measures
- Workshops with community and Government agencies to discuss social infrastructure access, community concerns about the Project, and mechanisms for cooperation between services and the Project
- Meetings with the Office of the Coordinator-General (OCG)
- Meetings with Yuggera Ugarapul People
- Engagement with Government agencies and Councils on the draft SIA's findings and management measures, through the OCG's Social Technical Advisory Group (Social TAG).

Social baseline

Engagement with community members in potentially affected communities indicates that they enjoy a rural lifestyle based on:

- A quiet environment
- Dependence on agriculture and local businesses
- Active outdoor recreation (such as bike riding, horse riding and trail walking)
- Dependence on small towns, such as Rosewood in the north and Peak Crossing in the south, for daily needs and social activities
- Involvement in the growing nature and food-based tourism industry.

Other features that support local quality of life include a clean and healthy environment, affordable housing, privacy, close community connections, access to local services and community events, and strong community networks.

The key features of the social baseline relevant to identification and assessment of social impacts are:

- Potential socio-economic disadvantage is evident in and near the SIA study area
- Population growth is occurring unevenly through the Project region, with significant growth of 30.2 per cent expected in the Ipswich LGA between 2021 and 2026, compared to 11.8 per cent in the Scenic Rim
- Indigenous people are more highly represented in several local communities when compared with Queensland's average representation of Indigenous people
- Scenic Rim LGA has an older median population compared to Queensland (and the Ipswich LGA)
- Peak Crossing, Ebenezer, Purga and Calvert recorded higher median household incomes than Queensland, whilst Willowbank and Rosewood recorded lower median incomes than the State median
- Ipswich LGA residents have good access to passenger rail services, whilst Scenic Rim LGA residents have limited access to public transport
- Outside the Ipswich and Rosewood communities, residents are heavily reliant on private transport.

The extended drought has affected the financial resources of families and businesses throughout the Project region, and the 2021 Census may reveal negative changes in socio-economic indicators such as household incomes, Socio-Economic Indexes for Areas (SEIFA) scores or workforce participation.

Social impacts

The Project has potential to result in the following social impacts, primarily for landholders in or near the disturbance footprint and residents in potentially affected communities. Property acquisition plans and concerns about potential Project impacts have already caused stress and anxiety for some local residents.

Potential impacts during the construction phase include:

- The Project will introduce additional linear infrastructure to the landscape, contributing to cumulative impacts on Indigenous people's feeling of connection with Country
- An estimated 60 households would need to relocate from in or near the EIS investigation corridor as the result of land acquisitions or the removal of tenanted dwellings from Department of Transport and Main Roads (DTMR)-owned properties, and may include people with low social resources
- Acquisition will result in the severance of approximately 26 lots which would fragment land parcels and impact on connectivity between land parcels
- Landholders who are within or near the rail corridor are concerned that the Project's land acquisitions or potential impacts on amenity may impact on property values
- Community cohesion may be reduced through displacement of residents, physical severance between properties, disruption to the road network and potentially, community conflict
- Construction noise will affect properties near the disturbance footprint whilst construction activities are conducted nearby, with the number affected at any one time depending on the type of works and progress of works along the alignment
- Whilst track construction works would progress along the corridor, any noise, dust or increased traffic related to laydown areas and bridge construction may affect residential amenity for extended periods during construction
- Tourism or event visitation could be affected by impacts on the road network or changes to scenic amenity in the disturbance footprint
- Construction works, road re-alignments and closures, and delays at level crossings are likely to delay traffic on roads directly impacted by the Project
- Emergency services or community support services in the Project region may experience increased demands
- Potential for cumulative impacts on housing or accommodation access, and for cumulative labour demands to affect other businesses' access to labour.

Potential impacts during the operations phase include:

- The amenity of properties and lifestyles of residents near the Project may be impacted by rail freight noise
- There is potential for railway noise to be audible in the Purga Nature Reserve whilst trains are passing
- Level crossings will result in periodic traffic delays, including potential to delay emergency vehicles during operation
- The presence of a freight rail line may increase the risk of road-rail accidents and rail suicides, resulting in social impacts for individuals, families, communities and rail staff.

Social benefits and opportunities

The Project would result in social benefits, primarily in relation to employment, training and business supply opportunities for residents in the Project region. Social benefits include:

- Project construction will provide employment for up to 620 personnel during 2021-2026, including Project region residents
- Training and employment opportunities will be provided for people who are disadvantaged in the labour market, including young people and Indigenous people
- Skills and business capability developed through the Inland Rail Skills Academy (e.g. STEM, scholarships)
- Employment opportunities may result in positive mental health benefits for the individuals employed, particularly if unemployed or irregularly employed
- The Project will provide significant opportunities for local and regional businesses, including Indigenous businesses, to participate in its supply chain
- The Project is likely to stimulate the development of the Ebenezer Regional Industrial Area (RIA), increasing employment opportunities in the Ebenezer area.

Additional benefits would accrue at State and national level, including economic benefits as described in the EIS (Appendix S: Economic Technical Report), and a reduction in heavy vehicles on roads, with consequent improvements in road safety as described in the EIS (Appendix U: Traffic Impact Assessment Technical Report).

Social impact management

The SIA includes a Social Impact Management Plan (SIMP) which outlines the objectives, outcomes and performance measures for mitigation of social impacts. Measures intended to enhance Project benefits and opportunities are also provided. The SIMP includes five action plans for:

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

The Project's mitigation program will include:

- Working closely with directly affected landholders to mitigate potential impacts on property amenity and agricultural businesses
- Engaging with adjacent landholders that may experience impacts on amenity through noise, increased traffic, dust or other impacts, to monitor the effectiveness of mitigation measures
- Engaging with the Department of Education, Queensland Health, Queensland Police Service (QPS), Queensland Ambulance Service (QAS) and Queensland Fire and Emergency Service (QFES) regarding changes to access routes or service demands
- Cooperation with Councils on a range of environmental, infrastructure and social impact/benefit management measures
- Cooperation with a range of stakeholders to develop and implement training and skills development partnerships and business capacity building programs

- Continuation of a mental health partnership established during the EIS phase to support residents experiencing stress and anxiety related to the Project
- Implementation of Inland Rail projects' social performance strategies to enhance Project benefits and opportunities including
  - Inland Rail Australian Industry Participation Plan and Sustainable Procurement Policy
  - Indigenous Participation Plan
  - Inland Rail Skills Academy
  - Inland Rail Community Sponsorships and Donations Program.

A monitoring strategy which will enable the Project to report on the delivery and effectiveness of SIMP is also provided.

At the completion of the construction phase, ARTC will develop a SIMP for the operational phase, incorporating ARTC's operational procedures for Inland Rail and including community and stakeholder engagement as detailed in Section 8.2.

1 Introduction

1.1 Purpose

ARTC proposes to construct and operate the Calvert to Kagaru Project (the Project) which consists of an approximately 53 kilometres (km) single track dual gauge greenfield railway with four crossing loops to accommodate double stack freight trains up to 1,800 metres (m) long. It will also involve the construction of an approximately 1,015 m tunnel through the Teviot Range to facilitate the required gradient across the undulating topography. The corridor will be of sufficient width to accommodate future possible upgrades of the track, including subject to further approvals a future possible requirement to accommodate trains up to 3,600 m in length.

This Social Impact Assessment (SIA) has been prepared as part of the Project's Environmental Impact Statement (EIS). The purpose of the SIA is to identify how the Project may affect local and regional communities, and how ARTC will work with stakeholders to enable mitigation of negative social impacts and enhancement of Project benefits. The objectives of the SIA are to:

- Identify potentially affected communities, having regard to potential social impacts throughout the Project's construction and operation
- Ensure transparent and inclusive community and stakeholder engagement informs the SIA process
- Develop a comprehensive baseline of social characteristics against which potential Project-related changes can be assessed
- Provide a detailed assessment of likely social impacts and benefits, including their significance to stakeholders and communities during each stage of the Project
- Provide the framework for a Social Impact Management Plan (SIMP) and monitoring strategy, including stakeholder engagement, to support adaptive management of social impacts and opportunities for the Project to benefit local communities.

1.2 Project location

The Project is a 'greenfield' (new rail corridor) project and is one of the 'missing links' within the Inland Rail Program. It will generally be located within the existing SFRC, which was protected in November 2010 as future railway land under Section 242(1) of the *Transport Infrastructure Act 1994* (Qld) (TI Act).

The Project commences approximately 1.8 km east of the village of Calvert within the Ipswich LGA and ends in the rural locality of Kagaru in the Scenic Rim LGA. The land requirement for the Project will comprise a corridor with a minimum width of 40 m with wider areas to accommodate earthworks associated with large cut and fill locations, drainage works, rail infrastructure, access roads and fencing. An allowance of 30 m has been included from the eastern end of the tunnel to the Undullah Road Crossing to maintain a tunnel access road to the eastern portal. The corridor will be of sufficient width to accommodate the infrastructure currently proposed for construction, as well as future expansion, including subject to further approvals possible future requirement for 3,600 m trains.

Starting from the western end, the Project diverts from the existing Western System rail line approximately 1.8 km east of Calvert and progresses in a generally south-easterly direction:

- Through rural land in the Lanefield locality
- To the south of Rosewood rural/rural residential area, approximately 4 km southwest of the town
- Approximately 1 km south of Ebenezer's rural residential properties, through the Ebenezer Industrial Area, and through rural properties in Lower Mount Walker

- Approximately 3 km to the southwest of the Willowbank rural residential community, and 250 m south of the Ipswich Motorsport Precinct
- Through the south of rural Purga
- Approximately 2 km east of Peak Crossing
- Through rural Washpool
- Through mountainous areas in rural Undullah via a tunnel of approximately 1,015 m through the Teviot Mountain Range
- Across Teviot Brook, to connect into the existing Brisbane Sydney Railway near Kagaru.

The Project connects to Inland Rail's H2C project to the east, and to the K2ARB project which proceeds northeast to Brisbane's major intermodal terminal at Acacia Ridge.

Section 4.3 defines the SIA study area.

2 Legislation, policy and guidelines

The Coordinator-General has declared the Project to be a 'coordinated project for which an EIS is required' under Section 26(1)(a) of the *State Development and Public Works Organisation Act 1971* (Qld) (SDPWO Act).

The Project was also referred to the Australian Government under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) and was determined as 'a controlled action'. The Project's EIS will address the requirements of the SDPWO Act and the EPBC Act under the Bilateral Agreement between the Australian and Queensland Governments.

The SIA has been conducted in accordance with the EIS Terms of Reference (ToR) and the Coordinator-General's SIA Guideline as outlined below. The SIA also considers local and regional planning objectives as described in Section 2.4.

2.1 State Development and Public Works Organisation Act

The SDPWO Act aims to facilitate 'timely, coordinated and environmentally responsible infrastructure planning and development to support Queensland's economic and social progress'. The Act provides for the appointment of a Coordinator-General representing the Queensland Government, and gives the Coordinator-General powers to (among other things) declare a project to be a 'coordinated project', evaluate an environmental impact statement for a coordinated project, and evaluate proposed changes to coordinated projects.

As the Project was declared as a 'coordinated project for which an environmental impact statement is required', ARTC must prepare a draft EIS which addresses the ToR to the satisfaction of the Coordinator-General.

2.2 Environmental Impact Statement Terms of Reference

The EIS ToR detail the matters which must be addressed in the EIS. The ToR objectives include:

"The construction and operation of the Project should aim to:

(a) avoid or mitigate/manage adverse social impacts arising from the Project

(b) capitalise on opportunities potentially available for local industries and communities."

Information requirements for the SIA are shown in **Table 2-1**.

Table 2-1: Social impact assessment information requirements

ToR Section	ToR No.	Terms of Reference	SIA Section
Social - Information requirements	11.140	Conduct a Social Impact Assessment (SIA) in accordance with the Coordinator-General's Social Impact Assessment guideline in place at the time of delivery of the SIA.	Section 2.3
	11.141	The SIA should be developed in consultation with the Coordinated Project Delivery Division in the Office of the Coordinator-General, Department of State Development, and describe the potential Social Impact Assessments (positive and negative) on affected communities. The proposed mitigation measures are to be discussed.	Section 6.2 Section 7 Section 8
	11.142	The SIA is to include:	
		(a) a profile of key stakeholders	Section 4.3.5 and 6

ToR Section	ToR No.	Terms of Reference	SIA Section
		(b) a social baseline study of potentially impacted communities within the SIA study area	Sections 5.1 to 5.7
		(c) an overview of state government legislation and policies and priorities which complement the mitigation measures for the Project's Social Impact Assessment	Sections 2.4 and 8.1.6
		(d) an explanation of sources used to gather information and analysis methods used. Discuss rationale for both primary and secondary data	Section 3.4
		(e) a description of how the potentially impacted communities and affected stakeholders were engaged and consulted with during the development of the SIA	Sections 6.1, 6.2 and 6.3
		(f) identification of potential social impacts and their likely significance, including duration	Sections 7 and 9
		(g) the proponent's proposed enhancement and mitigation/management measures in relation to project impacts	Sections 8.1 to 8.6
		(h) details of the proponent's proposed monitoring and reporting framework	Section 8.7
Social - Existing environment (SIA study area)	11.143	Define the Project's SIA study area (including the local, district, regional and state level as relevant), taking into account the:	Section 4.3
		(a) potential for social impacts to occur	Section 4.4
		(b) location of other relevant projects (existing major projects and/or developments and those which are progressing through planning and approval processes and public information is available)	Sections 5.1.4 and 7.6
		(c) location and types of physical and social infrastructure, settlements and land use patterns	Sections 5.1 and 5.6
		(d) social values that might be affected by the Project including integrity of social conditions, liveability, social harmony and wellbeing and sense of community	Section 5.3
		(e) indigenous social and cultural characteristics, such as native title rights and interests, and cultural heritage	Sections 5.1.1 and 5.3.2
Social - Existing environment (social baseline study)	11.144	Undertake a targeted baseline study of the people residing within the Project's SIA study area. This will provide a benchmark against which to identify the Project's social issues, potential negative and positive Social Impact Assessments, and the mitigation measures and management plans to address these impacts	Section 5
	11.145	The social baseline study should be based on qualitative, quantitative and participatory methods. It should be supplemented by community engagement processes and primary data collection, and should reference relevant data contained in local and state government publications, reports, plans, guidelines and documentation, including regional and community plans	Section 5

ToR Section	ToR No.	Terms of Reference	SIA Section
Social - Existing environment (community engagement)	11.146	A consultative and inclusive community and stakeholder engagement process should inform the baseline study, assessment of potential social Impacts and development of appropriate mitigation measures and management plans. The engagement should commence at an early stage of the EIS process. It should include consultation with a broad range of stakeholder groups including affected landholders, local residents, community groups, traditional owners, state and local government agencies, and non-government organisations, local businesses and traditionally-underrepresented stakeholders (for example vulnerable groups, women, people with a disability, Indigenous people and persons from diverse ethnic or linguistic backgrounds)	Sections 6.1, 6.2 and 6.3
	11.147	The community and stakeholder engagement process should be adequately described and documented in the EIS. This should include details such as stakeholders consulted and how and when they were consulted, principles and processes adopted, overview of the consultation program and key events, stakeholder feedback and issues raised (including the means by which these have been or will be addressed), and a statement of agreement/s reached, or to be negotiated, for impact mitigation and management	Sections 6.2, 6.3 and 8.2.3
Social - Potential impacts and mitigation (impact assessment)	11.148	Assess and describe the type, level and significance of the Project's social Impacts (both negative and positive), based on the outcomes of the community engagement, social baseline study and impact analysis processes. This should include sufficient data to enable affected local and state authorities to make informed decisions about the Project's effects. The potential social impacts will be identified by considering the potential changes to key aspects included in the social baseline study as a result of the Project	Sections 7 and 9
	11.149	Impact assessment should include an assessment of the potential scope and significance of impacts at the local and regional level, considering factors such as:	
		(a) population and demographic changes	Section 7.1.8
		(b) workforce	Section 7.2
		(c) lifestyles and amenity	Sections 7.1.4 and 7.4.4
		(d) community values	Sections 7.1.4 to 7.1.7
		(e) housing	Section 7.3
		(f) local and regional planning outcomes	Section 2.4.6
		(g) social infrastructure	Section 7.4.1
		(h) the health and social/cultural wellbeing of families and communities	Section 7.4

ToR Section	ToR No.	Terms of Reference	SIA Section
	11.150	The impact assessment should evaluate and discuss the potential cumulative social impacts resulting from the proposed project in combination with other existing major projects and/or developments and those which are progressing through planning and approval processes (where public information is available) within the SIA study area. Key issues assessed should include: (a) population (b) workforce (construction and operation) (c) workforce accommodation (d) local and regional housing markets (e) use of and access to community infrastructure, services and facilities (including social and health services and facilities)	Sections 7.6 and 9
	11.151	The impact assessment should include:	
		(a) the impacts identified by the SIA process	Sections 7.1 to 7.6, and 9
		(b) impacted stakeholders	Sections 4.3.5, 6 and 8.2
		(c) the timing or timeframes of impacts and the mitigation and management measures	Sections 7.1 to 7.6, and 8.1 to 8.6
		(d) description of the mitigation and management measures	Sections 8.1 to 8.6
		(e) defined outcomes, and the performance indicators and targets to achieve the outcomes	Section 8.7
		(f) monitoring and reporting framework	Section 8.7
		(g) residual impacts (after mitigation and management measures) and how these will be addressed	Sections 9 and 10
Social - Potential impacts and mitigation (management plans)	11.152	Management plans for the following are to be provided as part of the SIA:	
		(a) community and stakeholder engagement	Section 8.2
		(b) workforce management	Section 8.3
		(c) housing and accommodation	Section 8.4
		(d) local business and industry content	Section 8.6
		(e) health and community wellbeing	Section 8.5

2.3 Social Impact Assessment Guideline

The Coordinator-General published the Social Impact Assessment Guideline (SIA Guideline) in March 2018 (State of Queensland, Department of State Development, Manufacturing, Infrastructure and Planning 2018a), pursuant to the *Strong and Sustainable Resources Communities Act 2017* (Qld) (SSRC Act). The SIA Guideline is a non-statutory guideline for non-resource projects subject to an EIS under the SDPWO Act or *Environmental Protection Act 1994* (Qld) (EP Act).

The Project is a linear infrastructure project for which 'potentially affected communities' include towns and rural areas in and near the EIS investigation corridor rather than 'nearby regional communities' within a 125 km radius as defined by the SSRC Act.

The SIA responds to the SIA Guideline and includes:

- Consideration of the Guideline's key matters, for the full life cycle of the Project
- A description of how the potentially affected communities and stakeholders were consulted during the development of the SIA as part of a meaningful, inclusive and transparent engagement process
- Analysis of the nature and scale of the Project, potentially affected communities and the sensitivity of the social environment
- Development of a social baseline that includes demographic indicators, community values and history, community health and wellbeing, key industries, the local and regional workforce, access to social facilities and services, and housing and accommodation
- Consideration of factors which determine the likely scope and significance of the Project's social impacts
- Assessment of social impacts and opportunities across all relevant issue categories, for each stage of the Project lifecycle, including cumulative impacts
- Integration with the EIS process, including consideration of the social consequences of technical matters assessed in other parts of the EIS
- Provision of a SIMP which documents the management measures that address potential negative impacts and capitalise on positive opportunities, and includes a monitoring and reporting framework.

2.4 Local regional and State plans and policies

The objectives of regional and community plans relevant to potentially affected communities are outlined below.

2.4.1 South- East Queensland Regional Plan 2017 (ShapingSEQ)

The South East Queensland (SEQ) Regional Plan sets out five goals for the region's development: Goal 1: Grow, Goal 2: Prosper, Goal 3: Connect, Goal 4: Sustain and Goal 5: Live. Outcomes for the Western sub-region which includes the principal regional activity centres of Ipswich and Toowoomba, include a dispersed network of urban and rural centres, significant expansion areas, regional economic clusters (RECs) and infrastructure connections of national significance. Key actions of relevance to the Ipswich and Toowoomba LGAs include:

- Grow: focusing density in and around appropriate locations along urban corridors, and in areas with superior access to public transport, employment and services, including the Ipswich to Rosewood rail transport corridor, Rosewood/Thagoona/Walloon (identified for growth by expansion), and future urban growth in Lanefield
- Prosper: Identifying, protecting and growing economic opportunities and synergies within and between RECs, and supporting Ipswich to develop into a major economic hub featuring a diverse mix of economic activities and an emerging industrial corridor to the west, with long-term opportunities for a transport and logistics hub associated with Inland Rail
- Connect: The intent to be a region of interconnected communities that moves people and freight efficiently to maximise community and economic benefits with key improvements to the integrated regional transport system, including delivering the SFRC, and supporting delivery of the Inland Rail

- Sustain: Protect and nurture the regional biodiversity network and manage regional landscapes with following locations particularly relevant: Scenic Rim Corridor, which links Glen Rock State Forest south and east to the Gold Coast; Main Range – Helidon Hills Corridor, Little Liverpool Range to Wivenhoe Dam, and Helidon Hills – Blackall Range Corridor. This outcome includes recognition of Traditional Owners' cultural knowledge and connection to land and sea in planning.
- Live: Developing and promoting great places will support the sub-region's liveability, prosperity, sense of identity and community, including Ipswich City Centre, Toowoomba City Centre, Rosewood and Laidley.

Close relationships between SEQ LGAs and surrounding areas including the Darling Downs, and northern New South Wales are noted, including social and economic linkages, and infrastructure networks that support mutual social and economic benefits through employment, recreation and the movement of commodities, services and skills.

2.4.2 Ipswich and West Moreton Regional Plan

The Australian Government established Regional Development Australia (RDA) to help set up committees that seek to strengthen economic development in regional areas of Australia. RDA Ipswich and West Moreton focuses on five key economic development areas including Food and Agriculture, Infrastructure, Growth sectors, 'Intelligent region' and Tourism.

The RDA plan notes Ipswich as the fastest growing city in Queensland, with a diverse economy of businesses, including construction, retail, transport and defence operations. The plan notes businesses relating to horticulture, agriculture, tourism and equine are important and prevalent to the Scenic Rim LGA. The Willowbank Industrial Park, Ebenezer Regional Industrial Area and the Bromelton State Development Area (SDA) are identified in the Regional Plan.

2.4.3 City of Ipswich Transport Plan (iGO)

The iGO Plan was publicly released in 2015 to facilitate and guide the growth of transport in the city of Ipswich. Significant population growth in Ipswich means there needs to be considerable road, rail and bus transportation network growth. The iGO aims to provide a long-term plan and key short-term actions, to facilitate a variety of travel modes, a culture shift and strategic land use planning.

The iGO acknowledges the Inland Rail Program and identifies the need to support the planning, design and delivery of the program as a key short-term action.

2.4.4 Advance Ipswich

ICC's Community Plan Advance Ipswich (2015) builds on the programs and strategies in the previous i2020 and i2031 Community Plans and provides a renewed and contemporary focus for the future of the city.

The Plan is structured under five themes:

- Strengthening our Local Economy and Building Prosperity (Jobs)
- Managing Growth and Delivering Key Infrastructure
- Caring for Our Community
- Caring for Our Environment
- Listening, Leading and Financial Management.

The Plan's five themes include a goal with supporting strategies and key actions. Council's role in the delivery of each Key Action is also articulated to require management, support or advocacy.

2.4.5 Scenic Rim Community Plan 2011 – 2026

The Scenic Rim Community Plan considers the region's heritage and identity and sets a vision for the region's future. The vision includes the following:

- Spectacular scenery and healthy environment
- Sustainable and prosperous economy
- Open and responsive government
- Relaxed living and rural lifestyle
- Vibrant towns and villages
- Accessible and serviced region
- Healthy, engaged and resourceful communities
- Making it happen.

Each of the vision statements set clear outcomes, priorities and the expected role of Council in the delivery process. Whilst no specific projects are identified, a clear Council planning framework, and monitoring and review framework is set out to achieve, the identified vision statements.

2.4.6 Summary of alignment with planning priorities

The Project will support the following local and regional planning outcomes as outlined in **Table 2-2**.

Table 2-2: Project alignment with planning priorities

Document	Alignment with planning priorities
State Planning Policy Themes	▪ Project use of SFRC and alignment minimise impacts on the liveability of local communities ▪ Support for regional economic growth, for the long term ▪ Provision of freight rail infrastructure ▪ EIS includes measures to protect the regional biodiversity network ▪ The SIA includes measures supporting outcome includes recognition of Traditional Owners' cultural knowledge and connection to land ▪ The Project will support business activity during construction and may facilitate private investment in transport and logistic hubs, increasing employment opportunities and prosperity.
South East Queensland Regional Plan	▪ Support for economic opportunities and synergies within and between RECs ▪ Support for the development of interconnected communities that move freight efficiently ▪ Recognition of the regional biodiversity network.
iGO	▪ Contribution to delivery of an effective and efficient freight transport network
Advance Ipswich	▪ Support for a strong and sustainable regional economy, and for the growth of industry and business activities
Ipswich and West Moreton RDA Plan	▪ Support for the development of Ebenezer Regional Industrial Area and the Bromelton SDA
Scenic Rim Community Plan	▪ Support for a sustainable and prosperous economy ▪ Alignment avoids impacts on local communities ▪ Design minimises impacts on natural economic resources such as productive rural land ▪ Project avoids town centres

3 Methodology

This section describes how the SIA was conducted including:

- Engagement 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
- Defining the SIA study area and the scope of assessment
- Developing a social baseline which combines quantitative and qualitative data, to provide an overview of existing conditions in local and regional communities
- Assessing the likelihood, nature and distribution of potential social impacts and benefits, and evaluating their significance for social conditions and stakeholders
- Considering the results of EIS technical studies with a bearing on social impacts and benefits
- Assessing the potential for cumulative social impacts of multiple projects
- Developing management measures which avoid, reduce or offset social impacts, and maximise Project benefits
- Evaluating the significance of social impacts and benefits.

Aspects of the methodology are outlined below.

3.1 Stakeholder engagement

The purpose of stakeholder engagement was to provide the opportunity for directly affected stakeholders and other community members to provide informed input to the social baseline, impact assessment and mitigation measures. The principles for stakeholder engagement are shown in **Table 3-1**.

Table 3-1: Social Impact Assessment engagement principles

Principles	How achieved
SIA is informed by consultation with directly affected stakeholders	▪ The views of community members who may be affected by the Project's impacts or benefit from Project opportunities were sought and represented in the social baseline, impact assessment and development of mitigation measures
SIA engagement is inclusive of all interested stakeholders	▪ The opportunity for engagement was available and accessible through the community survey, community information sessions, drop-in sessions, Community Consultative Committee (CCC) meetings (members and observers), and ARTC's online Social Pinpoint and Interactive map tools ▪ The results of ARTC's engagement with traditional custodians, businesses and other key stakeholders are incorporated in the SIA
Stakeholders are able to provide informed inputs to the SIA	▪ Stakeholders have access to information about the Project through face to face and online options, and to EIS team members to discuss social and environmental implications, as the basis for providing their inputs.

SIA engagement was integrated with ARTC engagement processes for the Project, as described in Section 6.1 and EIS Chapter 5: Stakeholder Engagement.

A profile of SIA stakeholders and their key issues is provided in Section 4.3.5. The SIA engagement process is detailed in Section 6.2 and included:

- A community survey involving more than 400 residents in the Toowoomba, Lockyer Valley, Ipswich and Scenic Rim LGAs, to seek their inputs on community values and identify their concerns about potential social impacts
- Meetings with IRC and SRRC managers to discuss community concerns, vulnerabilities, potential social impacts and benefits, and mitigation and management measures
- Workshops with community organisations and Government agencies including Liworaji Aboriginal Corporation, Department of State Development Manufacturing Industry and Planning (DSDMIP), DTMR, Department of Employment Small Business and Training (DESBT), Department of Education and Training (DET), Department of Communities, Disability Services and Seniors (DCDSS), Department of Aboriginal and Torres Strait Islander Partnerships (DATSIP), Department of Housing and Public Works (DHPW), Queensland Health QPS, and Department of Infrastructure Transport Regional Development and Communications (DITRDC) to discuss social infrastructure access, community concerns about the Project and opportunities to collaborate on training and employment programs
- Meetings with the OCG
- Meeting with representatives of the Yuggera Ugarapul People.

The SIA also considers the results of ARTC's engagement with directly affected and nearby landholders, traditional custodians, businesses, and community, environmental and economic groups.

The results of stakeholder engagement are provided in Section 6.3 and have been incorporated throughout the SIA as referenced.

3.2 Scoping

The purpose of the SIA scoping process is to identify potentially affected communities and define the focus for assessment. The scoping process identified potential affected communities and regions by considering:

- Statutory requirements for the SIA
- The stakeholder profile and stakeholder inputs of relevance to the SIA
- The nature and scale of the Project, including associated infrastructure, and its interactions with stakeholders and communities as identified by:
  - Consultation with landholders and other residents living near the Project
  - Native Title rights and other interests held by Indigenous people
  - The Project's interactions with the settlement pattern, including urban/rural centres, land uses patterns and infrastructure
- The nature and scale of potential social impacts and benefits throughout the Project lifecycle, based on research and experience with linear infrastructure projects
- The location of other projects in the region which may contribute to cumulative social impacts over time.

Following consideration of the above factors, the SIA study area was defined, and preliminary screening of potential impacts and benefits was undertaken. The outcomes of the scoping process are reported in Section 4.4.

3.3 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 research and analysis of:

- Potentially affected communities' history, land use and settlement pattern
- Population size, composition and growth
- Housing and accommodation availability and affordability
- Community values
- Community health and safety
- Employment, labour force and skills
- Business and industry
- Infrastructure provision including physical infrastructure (e.g. roads and rail lines) and social infrastructure (community facilities, services networks).

Stakeholder engagement outcomes assisted to define community values and validate research findings. The baseline includes a summary of social indicators against which quantitative changes in social conditions can be measured.

3.4 Impact assessment

Impacts were assessed for the construction and operational phases of the Project. The SIA includes assessment of potential cumulative impacts in relation to the Inland Rail's adjoining sections and other major projects in the Ipswich and Scenic Rim regions. A summary of the assessment methods and data sources is provided in **Table 3-2**.

Table 3-2: Social Impact Assessment Methods

Social domains	Assessment method	Data sources
Community and stakeholder engagement	▪ Stakeholder analysis and SIA scoping process ▪ Analysis of stakeholder engagement inputs ▪ Analysis of planning context ▪ Analysis of community values	▪ Primary data: collected through stakeholder engagement outcomes (community survey, community information sessions, Interactive map, meetings and interviews) ▪ Secondary data: Regional and Community Plans
Settlement pattern	▪ Identify the distribution and key indicators of the population in the SIA study area ▪ Identify and describe the location of potentially affected communities and land uses, and the physical and social connections between them ▪ Compare the SIA study area and activities to the baseline to identify potential changes to social characteristics ▪ Identify potential negative impacts on the use and amenity of properties and communities	▪ Primary data: corridor scan (physical and via aerial maps) ▪ Secondary data: Planning Schemes, Regional Plans, Regional Transport Plan

Social domains	Assessment method	Data sources
Population, housing, employment and skills	▪ Demographic analysis and research ▪ Model potential impacts on population, housing and labour demand based on population projections, current labour force profile and Project workforce estimates	▪ Primary data: Project workforce estimates and accommodation plans ▪ Secondary data: Australian Bureau of Statistics (ABS) Census of 2016, Queensland Government Statistician's Office Regional Profiles and Projections, SQMResearch, realestate.com.au, and other sources as referenced
Social infrastructure	▪ Profile the provision and where known, the capacity of social infrastructure servicing local and regional communities ▪ Consult social infrastructure providers to identify specific local vulnerabilities, potential impacts on social infrastructure, community capacity to address social impacts, and strategies to reduce impacts and enhance Project benefits ▪ Model potential impacts on social infrastructure as a result of workforce influx, and describe the potential for the Project to affect social infrastructure functions, either directly or indirectly	▪ Primary data: stakeholder engagement outcomes, social environmental scan outcomes and population modelling ▪ Secondary data: desktop research of various websites and databases as referenced
Community values (e.g. amenity, cohesion, community identity, rural values)	▪ Community survey and supplementary engagement to identify community values ▪ Analysis of values identified in community and regional plans and reports ▪ Identify Project design and management measures relevant to community values ▪ Describe the potential for Project impacts to affect community values	▪ Primary data: Stakeholder engagement outcomes, Project design and management measures ▪ Secondary data: community and regional plans
Health and wellbeing	▪ Consultation and research to identify community health and safety status ▪ Consultation with social infrastructure providers to identify any changes to facilities' access or amenity which could affect community wellbeing or safety ▪ Consideration of changes to social conditions and the physical environment which may affect human health, community wellbeing or community safety	▪ Primary data: Stakeholder engagement outcomes ▪ Secondary data: ABS Census of Population and Housing 2016, Population Health Information Data Unit (PHIDU) data, EIS assessments of air quality, noise and vibration, traffic impacts, visual amenity and water quality

Social domains	Assessment method	Data sources
Business and Industry	▪ Analysis of the distribution, type and size of business in local communities, and profiling of regional businesses with relevant capabilities ▪ Engagement with businesses to identify opportunities for participation in the Project	▪ Primary data: Stakeholder engagement outcomes ▪ Secondary data: ABS data and other sources as referenced

Table 3-3 provides information on the reliability of data used in the SIA.

Table 3-3: Data quality summary

Data type/set	Source	Currency	Reliability
Demographic data	ABS Census of Population and Housing	2016	Minor variances in totals due to ABS rounding procedures Indigenous people traditionally under-represented in Census (~10 per cent) Uncertainties regarding potential changes since 2016
Population and housing projections	Queensland Government Statistician's Office	2017	Good, but with uncertainties regarding effect of newly proposed projects and economic trends on projections
Housing data	ABS Census of Population and Housing SQM Research	2016 2020	Good, but with uncertainties regarding effect of cumulative impacts and economic trends on housing markets
Public Health Information Development Unit (PHIDU)	ABS Census of Population and Housing and other sources as referenced	Variable, as referenced	Variable, as referenced. Local relevance of modelled estimates is uncertain
Social infrastructure provision	Stakeholder feedback and various research sources	2019	Good, but no consistent data available on the capacity of local services
Labour force	Department of Jobs and Small Business Labour Market Portal	2016, 2020	Good, but subject to seasonal fluctuations and under-representation of rural unemployment
Research references	As referenced	Various	Variable, as referenced, with lack of certainty about

3.5 Integration with Environmental Impact Statement findings

Changes to the biophysical environment, infrastructure or land use may result in social impacts including impacts on amenity, health, safety or sense of place. The SIA integrates the relevant findings of the EIS technical studies as shown in **Table 3-4**.

Table 3-4: Links to Environmental Impact Statement findings

Chapter	Relevance	EIS Section	SIA Section
Land Use and Tenure	▪ Existing and proposed land use Properties to be acquired	Chapter 8	7.1.2
Cultural Heritage	▪ Impacts on Indigenous and historic cultural heritage	Chapter 18 and Appendix T	7.1.1, 7.1.7

Chapter	Relevance	EIS Section	SIA Section
Economics	▪ Project's regional, State and national benefits ▪ Flow-on employment	Chapter 17 and Appendix S	7.2
Stakeholder Engagement	▪ Results of integrated stakeholder engagement process	Chapter 5 and Appendix C	6
Landscape and Visual Amenity	▪ Impacts on visual amenity	Chapter 10 and Appendix I	7.1.7
Air Quality	▪ Findings in relation to health	Chapter 12 and Appendix L	7.1.4
Noise and Vibration	▪ Assessment findings in relation to amenity and health	Chapter 15 and Appendix P and Appendix Q	7.1.4, 7.4.2
Traffic, Transport and Access	▪ Changes to traffic network and travel times	Chapter 19 and Appendix U	7.1.4
Groundwater	▪ Changes to the availability of groundwater	Chapter 14 and Appendix O	7.4.4
Surface Water	▪ Changes to surface water flows or quality	Chapter 13 and Appendix M	7.4.4
Hazard and Risk	▪ Risks to human health and safety	Chapter 20	7.4.5
Draft Outline Environmental Management Plan	▪ Inland Rail's environmental management framework for design, construction and commissioning	Chapter 23	Various

3.6 Cumulative social impact assessment

Cumulative social impact assessment considers the potential for the combined impacts of a set of projects to affect a social environment over time. The SIA considers the potential impacts of the adjacent Inland Rail projects - H2C and K2ARB - along with other major projects in the SIA study area that may be constructed or operated in a similar timeframe to the Project.

The assessment commenced with development of:

- A list of applicable projects and operations for consideration in the cumulative social impact assessment
- A figure showing the area which might be influenced both spatially and socially by the Project, and its overlap with relevant projects or operations (refer EIS Chapter 22: Cumulative Impacts)
- A timeline of construction, and operation to show the temporal relationship between the Project and other projects and operations
- A matrix listing potential cumulative social impacts and their potential significance.

A review of the EISs for other projects, relevant literature and qualitative analysis enabled potential cumulative impacts at the local and regional levels to be identified. Finally, cumulative impacts were considered in evaluating the significance of social impacts and benefits, and collaborative strategies to address cumulative impacts included in the SIMP.

3.7 Significance assessment

At the conclusion of the impact assessment stage, a two-stage significance assessment was undertaken. This considered:

- Stakeholder inputs on how the expected the Project would affect their communities or households
- The likelihood and consequence of potential social impacts and benefits
- Application of ARTC's commitments, and management measures which address social impacts and benefits that were identified in the SIA process
- Identification of residual impacts deemed to be of 'medium' or 'high' significance.

3.8 Social Impact Management Plan

The SIMP provides mitigation strategies and management measures for social impacts, and strategies designed to enhance Project benefits. The SIMP includes five action plans addressing community and stakeholder engagement, workforce management, housing and accommodation, local business and industry content, and health and community wellbeing. The process for SIMP development included:

- Stakeholder engagement to identify stakeholders' suggestions about mitigation measures
- Incorporation of ARTC's mitigation, management and enhancement commitments into the SIMP
- Designing additional mitigation, management and enhancement measures where impacts would be of medium or high significance
- Developing performance indicators and a monitoring and reporting framework to support adaptive management of social impacts.

3.9 Limitations

The findings of this report are based on the information available to date.

Following project approval, the Project will undergo a detailed design phase, during which components such as level crossing designs, road re-alignments and construction methodologies will be refined. Should the final design and construction methodology differ from the current information available, social impacts may vary.

Details of land acquisition for the Project were still developing whilst this report was being drafted. This assessment includes assumptions about the number of acquisitions required based on the number of properties directly affected (refer Section 7.1.2). Updates to this assessment may be required following the detailed design process.

As the construction and operation of new freight rail lines is uncommon, there is little to no evidence on which to draw regarding social impacts such as changes to property values, resilience to construction noise and the extent to which changes to road networks may affect tourism or other businesses. Such uncertainties are reflected in relevant sections of this report.

At the time that the SIA was being completed, uncertainties were emerging regarding changes to social and economic conditions as the result of the COVID-19 pandemic. Potential changes to social baseline conditions in the SIA study area include:

- Increased unemployment, resulting in increased availability of labour to the Project and other projects considered as part of the cumulative social impact assessment
- Changes to labour mobility, which in the short term may be constrained, and in the longer term may increase as specific industries and regions recover from changes to economic conditions

- Loss of the viability of small businesses, with the retail, accommodation and tourism sectors among those likely to be affected
- Potential to decrease household incomes, savings or asset value, leading to the potential for increased disadvantage
- Changes to the capacity of health, police and ambulance services due to the need for services to respond to the pandemic
- Increased anxiety levels and changes to mental health, with an increased need for mental health services
- Increased service capacity as the result of government and community responses to the pandemic, e.g. investment in training or mental health services, which may or may not be of adequate capacity to respond to social and economic changes
- Changes to community resilience, cohesion and/or liveability due to physical distancing measures and/or other unknown changes to social dynamics.

Such changes to the social baseline could change the way that communities experience the social impacts and benefits of major projects, e.g.:

- The availability of employment and business opportunities will become critical to community and economic recovery
- Increased labour availability within the SIA study area could reduce the potential for cumulative impacts on housing and accommodation
- Changes to community resilience (either positive or negative) or mental health may affect the way people experience Project impacts
- People may be more tolerant of temporary impacts such as the effects of construction work on amenity in recognition of broader community benefits such as employment and business opportunities.

Some data on indicators such as unemployment are becoming available during 2020, whilst data on indicators such as income levels, the relative economic strength of industry sectors and indicators of community cohesion may only be available after the ABS Census of Population and Housing 2021 (with this data expected to be available from 2022-2023).

Assuming the Project is approved and progress to detailed design, ARTC will review the available data on key indicators such as labour and housing availability, and engage with ICC and SRRC to discuss changes to social conditions in the SIA study area. Any need for a review of the significance of social impacts and benefits in light of social and economic changes resulting from the COVID-19 pandemic will be agreed with the OCG at that time.

4 Project description and social impact assessment scope

This section describes the Project, the scope of the SIA and the SIA study area.

4.1 Project description

The Project is a 'greenfield' (new rail corridor) project and is one of the 'missing links' within the Inland Rail Program. The Project will generally be located within the existing SFRC, which was identified as a major freight link connecting the Western Rail line near Rosewood to the interstate railway north of Beaudesert. The SFRC is 80 m to 100 m wide and extends about 53 km from Calvert at its northern extent to Kagaru at its south-eastern extent.

DTMR undertook studies and stakeholder engagement to develop the SFRC. Where possible, the SFRC was placed along the boundary of properties to avoid severing grazing properties and croplands. The Project includes a southern fork at Kagaru to allow customers to utilise the SCT Logistics intermodal facilities in Bromelton, however any planned works are not currently part of the Project.

The SFRC Study Report notes that, whilst the SFRC alignment was designed to avoid conflicting land use impacts as much as possible, it was likely to change sections of the quite rural nature and character of parts of the SFRC study area by introducing freight rail traffic and potentially catalysing development of regional industry (DTMR 2010). The report also notes that the SFRC complements the future planning intent for much of the SFRC study area, in particular the future industrial precincts of Ebenezer and Purga, with the possibility of an intermodal freight terminal along the corridor, which could generate significant employment.

The objectives of the Project are to:

- Provide upgraded rail infrastructure that meets the Inland Rail specifications, to enable trains using the Inland Rail corridor to travel between Calvert and Kagaru, connecting with other sections of Inland Rail to the northwest and southeast
- Minimise the potential for adverse environmental and community impacts.

The intended land use for the Project is rail and associated infrastructure, including road realignments, grade separations and ancillary infrastructure. ARTC would be granted a sub-lease over the gazetted rail transport corridor to manage the movement of freight in accordance with the TI Act.

The land requirement for the Project will comprise a corridor with a minimum width of 40 m, with some variation to accommodate particular infrastructure, for example lay down areas and the Teviot Range Tunnel construction, and to cater for local topography. The corridor will be of sufficient width to accommodate the infrastructure currently proposed for construction, as well as future expansion, including subject to further approvals possible future requirement for 3,600 m trains.

The Project will be delivered through a delivery method to be determined in future project stages. Under this delivery arrangement, the private sector will design, build, finance and maintain this section of the railway over a long-term concession period.

The Project's indicative timeframe is:

- 2018 to 2021: design, planning and approvals
- 2021 to 2022: pre-construction and land acquisition
- 2022 to 2026: construction
- 2026: operations commence.

Elements that are not included as part of the Project include:

- Complementary infrastructure, such as metropolitan and regional freight terminals
- Upgraded fleet/rolling stock
- Complementary land use and freight precinct developments.

The following subsections describe the Project nature and scale as relevant to stakeholders and the social environment.

4.1.1 Pre-construction activities

For the purpose of this assessment, pre-construction activities include ongoing activities and early works as described in Chapter 6: Project Description. Pre-construction activities will include:

- Securing land access and undertaking land surveys
- Geological and geotechnical investigations
- Ecological investigations
- Cultural heritage surveys, which have already commenced as land access and Cultural Heritage Management Plans (CHMPs) have been agreed with the Yuggera Ugarapul People and Jagera Daran People
- Securing access to borrow material (for construction of rail ballast and embankments)
- Establishment of site compounds, fencing and access tracks.

4.1.2 Construction

Project construction is planned to start in 2021 and is expected to be completed in 2026. Construction would include:

- Site preparation including site clearance and vegetation clearing in the rail corridor and for associated construction sites (disturbance footprint), and stockpiling of turf and topsoil where possible)
- Establishment of site compounds and facilities, installation of temporary and permanent fencing, installation of drainage and water management controls and construction of site access including temporary haul roads
- Relocation of impacted utilities and roads
- Establishment of hardstand areas for laydown, storage, material distribution, flash butt welding and administration facilities
- Civil works, including bulk earthworks, construction of cuts and embankments, installation of permanent drainage controls, bridge and watercourse crossing construction, and environmental management measures (e.g. fauna crossings)
- Construction of the tunnel using roadheaders or drill and blast techniques for excavation construction of tunnel portals and installation of a permanent concrete tunnel lining
- Track works including the installation of ballast, sleepers and rails
- Installation of rail systems infrastructure and wayside equipment including signals, turnouts and asset monitoring infrastructure.

Excess material resulting from excavation will be stockpiled along the rail corridor and will be formed into permanent spoil mounds, spread out to minimise height.

Construction work will be undertaken from Monday to Friday – 6.30 am to 6.00 pm and Saturday from 6.30 am to 1.00 pm, with no work on Sundays or public holidays. Track possessions will generally be allocated over weekend periods, with extend track possession occurring over holiday periods. Non-standard construction hours may also be utilised, as discussed in EIS Chapter 6: Project Description and Chapter 15: Construction Noise and Vibration.

4.1.3 Operations

Following construction, testing and commissioning (checking) of the rail line and communication and signalling systems will be undertaken. Construction sites, compounds and access routes would be returned the same or better condition than prior to construction commencing.

The Inland Rail Program as a whole will be operational once all 13 sections are complete, which is estimated to be in 2026. The Project will form part of the rail network managed and maintained by ARTC and will involve operation of a single rail track with crossing loops. The Project will accommodate double stacked freight trains up to 1.8 km in length and 6.5 m high, with subject to further approvals potential for future accommodation of freight trains of 3,600 m in length.

Train services will be provided by a variety of operators. Trains will be a mix of grain, bulk freight and other general transport trains. It is estimated that the operation of Inland Rail will involve an annual average of about 33 train services per day (northbound and southbound) in 2026. This is likely to increase to approximately 47 train services per day in 2040. Train speeds will range from 80 to 115 km per hour.

Operational processes will include:

- The use of the railway for freight purposes
- Standard ARTC maintenance activities including:
  - Minor maintenance works, such as bridge and culvert inspections sleeper replacement, rail welding rail grinding, ballast profile management and track tamping
  - Major periodic maintenance, such as ballast cleaning, reconditioning of track, and adjustment and correction of track level and line
- Operation and maintenance of tunnel ventilation, safety systems and signalling infrastructure.

Standard rural fencing (post and wire) will be required to the extent of the Project but is not generally required between the corridor and an adjacent railway or road corridor. Where superior fencing is required (near roads or to prevent trespass), a 1.8 m chain wire fence may be provided with gates at corridor entry/exit locations and private level crossings.

Tunnel operations will require power and water supplies for ventilation and fire safety. Electricity supply will also be needed for points, signalling and other infrastructure. It is anticipated that the supply of these services will be delivered by relevant providers under the terms of their respective approvals and/or assessment exemptions.

4.1.4 Workforce

Pre-construction activities are anticipated to require a small number of personnel (approximately 20 to 50 people) over a six to 12 month period.

For the construction period, the size and composition of the workforce will vary depending on the construction activities being undertaken and the staging strategy adopted. The workforce is expected to build during 2022 and peak in 2023 at approximately 620 personnel. The average workforce across the construction period would be approximately 271 personnel.

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.

The construction workforce is expected to be drawn from communities within the Ipswich, Scenic Rim, Brisbane, Beaudesert, Logan, and Toowoomba LGAs. It is likely that a portion of the construction workforce will be sourced from nearby communities. On this basis a workforce accommodation facility is not proposed.

Once operational, a workforce of approximately 20 personnel is expected, to undertake monitoring and maintenance of the track and infrastructure, signalling, environmental monitoring and management of land and infrastructure in the railway corridor.

The majority of the operational workforce is expected to be drawn from nearby communities, returning home after their shifts, with little potential for change to population or housing demand in the Project region. The potential for workforce accommodation demands to be experienced in local communities is discussed in Section 7.3.

4.1.5 Supply opportunities

The Project will require construction supplies, including borrow material, ballast material, pre-cast concrete, concrete sleepers and turnout panels, steel, fencing, electrical components, fuel and consumables. A range of services will also be required during construction and operations, many of which may be sourced locally (refer Section 7.5.5). Ballast material will be sourced from local quarries.

Operational supplies may include ballast material, and services and materials for maintenance of the rail corridor, bridges, fences, crossings, and rehabilitation services.

4.1.6 Decommissioning

The Project will form part of the rail network managed and maintained by ARTC and is planned to operate for 100 years. Decommissioning would involve removal and recycling of the track and infrastructure which is not required for other future purposes, and rehabilitation according to a Rehabilitation Plan that will be developed in later phases of the Project. The number of personnel required for decommissioning works is unknown.

Access roads and tracks that will no longer be used will be decommissioned and restored to a condition generally consistent with the pre-existing characteristics of the area. The rail corridor would then be rehabilitated to enable future land uses to proceed.

As the Project has a design life of 100 years, to approximately 2125, the social impacts of Project decommissioning cannot be foreseen and are not discussed in the SIA.

4.2 Social Impact Assessment scope

This section details the scope of the SIA, which was defined by considering:

- Statutory requirements for social impact assessment
- The Project's key elements and operational processes which may impact on social values
- Stakeholder inputs on potential impacts and benefits
- Workforce estimates and the likely origin of personnel.

A preliminary assessment of potential impacts and benefits was then undertaken as the basis for identifying potentially impacted communities and stakeholders.

4.2.1 Statutory requirements

The SIA has addressed the OCG's statutory requirements as provided by the ToR and the SIA Guideline (discussed in Sections 2.2 and 2.3). The SIA Guideline's central requirement for the SIA is to assess the type, level and significance of the Project's social impacts (both negative and positive) throughout the Project lifecycle, based on the outcomes of the community engagement, social baseline study and impact analysis processes, including cumulative impacts. The SIA is also required to integrate the relevant results of other EIS chapters as relevant to social values (refer Section 3.5).

The SIA Guideline provides detailed assessment requirements, which have been addressed throughout the SIA, and in the development of a SIMP (refer Section 8).

4.2.2 Project elements and operations

Project elements with potential for social impacts and benefits are summarised in **Table 4-1**.

Table 4-1: Project elements of relevance to the social environment

Key elements	Detail	Potential impact areas
CONSTRUCTION		
Disturbance footprint	Creation a rail corridor with minimum width of 40 m, with wider areas to accommodate earthworks associated with large cut and fill locations, drainage works, rail infrastructure, access roads and fencing. An additional 30 m footprint width has been included for the eastern end of the tunnel to Kagaru due to the undulating terrain, multiple interfaces with Woollaman Creek and Wild Pig Creek, and the limited available geotechnical data for this area. Construction of an approximate 53 km rail line, including: ▪ 17.7 km in cut ▪ 33.5 km of embankment ▪ A total of 27 bridges ▪ A tunnel of approximately 1,015 m through the Teviot Range. Project construction will require 29 laydown areas located approximately every 5 km, to accommodate storage and distribution of construction materials and facilitate construction activities. There will be 27 new bridge structures including: ▪ 5 bridges over waterways and roads ▪ 16 rail bridges over waterways ▪ 3 rail bridges over road ▪ 3 road bridges over rail.	▪ Connectivity ▪ Community cohesion ▪ Agricultural operations ▪ Residential amenity and character ▪ Privacy and feelings of security ▪ Travel behaviour ▪ Health ▪ Concerns about property values ▪ Noise ▪ Water availability
Roadworks	The Project requires re-alignment of the Cunningham Highway, including construction of a road-over-rail bridge, works to the Ipswich Boonah Road including a rail-over-road bridge, re-alignments of several local connector roads and minor modifications, as described in Section 7.1.5.	▪ Road network access ▪ Property access ▪ Connectivity ▪ Traffic safety

Key elements	Detail	Potential impact areas
Construction employment	The construction workforce is expected to peak at approximately 620 personnel. The average workforce across the construction period would be approximately 271 personnel. The Project will engage businesses within the Project region in its supply chain which will support indirect employment.	▪ Local employment and training opportunities ▪ Labour draw ▪ Workforce behaviour
OPERATIONS		
Freight rail operation	Double-stacked container freight trains of up to 1,800 m length, with potential subject to further approvals for future accommodation of freight trains of 3,600 m length from 2040. Approximately 33 train movements per day are anticipated by 2026, which may increase to approximately 47 trains movements per day in 2040.	▪ Residential amenity ▪ Rural character ▪ Tourism values ▪ Community safety ▪ Regional development ▪ Health and wellbeing
Operational employment	Approximately 20 personnel	▪ Local employment and training opportunities
Corridor security	Standard rural fencing (post and wire) will generally be provided to the extent of the Project but is not generally required between the corridor and an adjacent railway or road corridor. Where superior fencing is required (near roads or to prevent trespass), a 1.8 m chain wire fence may be provided with gates at suitable corridor entry/exit locations and at private level crossings	▪ Connectivity ▪ Stock and agricultural equipment movements ▪ Pedestrian and cycle movements
Level crossings	Nine level crossings are proposed on public roads as part of the Project	▪ Connectivity ▪ Emergency services access ▪ Traffic safety ▪ Rural character ▪ Agricultural movements
Crossing loop operation	Crossing loops are proposed at: ▪ Ebenezer ▪ Purga Creek ▪ Washpool ▪ Undullah	▪ Residential amenity - noise characteristics and air quality ▪ Connectivity
Track maintenance	Regular track maintenance would be performed	▪ Noise ▪ Employment
DECOMMISSIONING		
Removal and rehabilitation	Track and infrastructure removal and corridor rehabilitation	▪ Employment and training opportunities ▪ Future use opportunities

4.3 Social Impact Assessment study area

The SIA study area was identified by considering the:

- Project's location and activities in relation to population centres and rural localities
- SIA Guideline requirement to identify potentially affected communities

- Likely distribution of potential social impacts and benefits at local and regional levels
- Results of ARTC consultation prior to commencement of the EIS
- Location of other relevant projects which may contribute to cumulative social impacts.

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 acquisitions or noise, whilst those who live in nearby communities could experience different impacts e.g. traffic disruptions or changes to service access. Impacts such as demand for accommodation and benefits related to employment may be experienced across a region.

The SIA discusses social impacts for different geographies, including:

- The disturbance footprint and the EIS investigation corridor which are defined in Section 4.3.1
- Potentially affected communities, as detailed in Section 4.3.2
- The Project region, which refers to the Ipswich City and Scenic Rim LGAs as defined in Section 4.3.3.

The SIA study area is shown in Figure 4-1.

4.3.1 Disturbance footprint

The Project commences approximately 1.8 km west of the village of Calvert within the Ipswich LGA and ends in the rural locality of Kagaru in the Scenic Rim LGA.

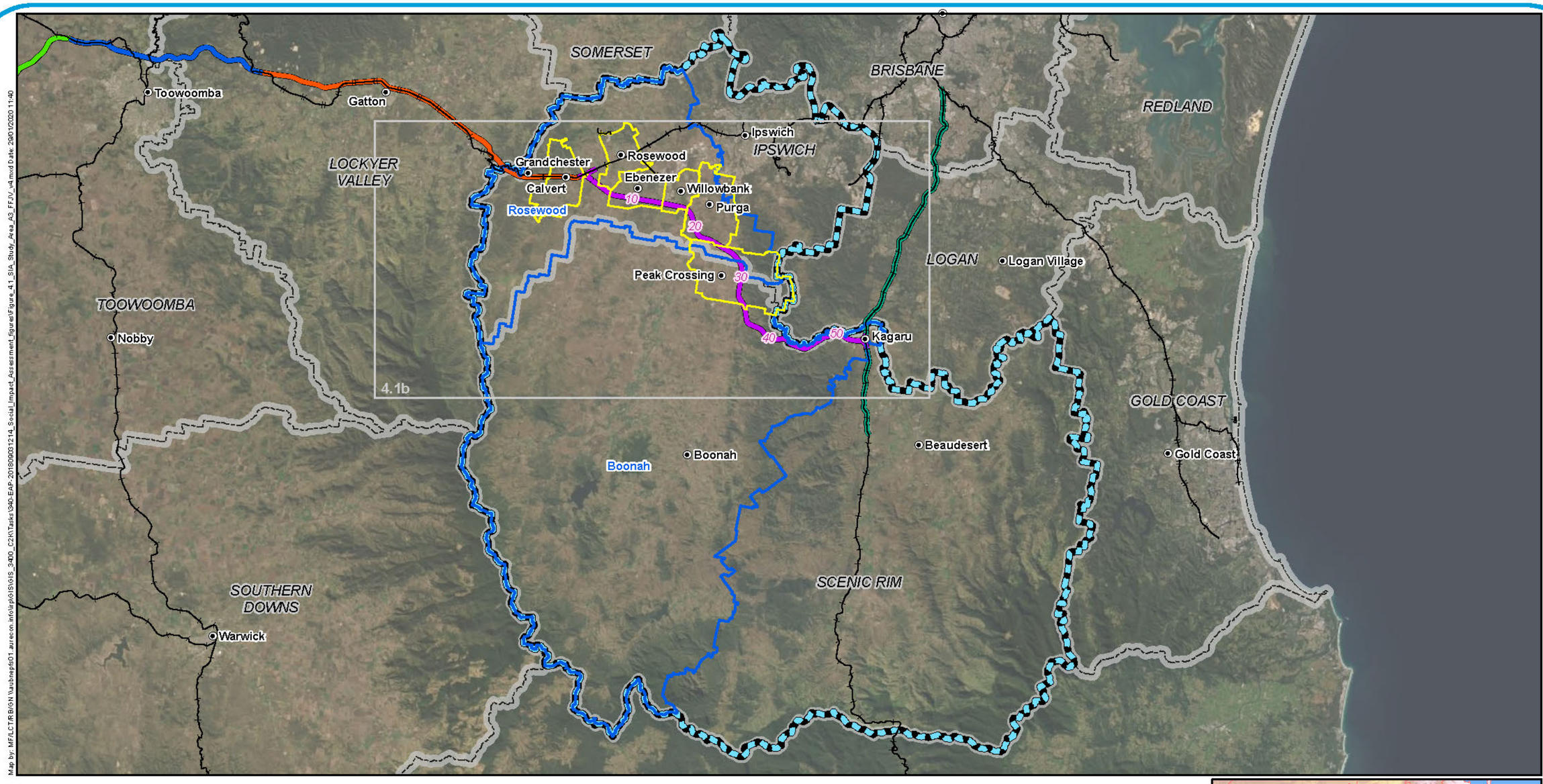
The disturbance footprint refers to:

- The rail corridor, which is the corridor within which the rail tracks and associated infrastructure are located, and includes signalling infrastructure, maintenance sidings, drainage infrastructure, tunnel access, road/rail interfaces, culverts and bridges, crossing loops and fencing
- Areas used temporarily for construction purposes, including laydown and construction areas, earthworks, utilities, access tracks and road works.

The disturbance footprint is contained within the EIS investigation corridor, which refers to the area approximately one km either side of the disturbance footprint.

Community members within and near the disturbance footprint are a key focus for the SIA. Key characteristics of Statistical Area 1 (SA1) areas within which the disturbance footprint is located were identified in order to understand population distribution and potential community vulnerabilities. Figure 5-1 (Section 5.2.1) shows the location of the Project alignment in relation to SA1s.

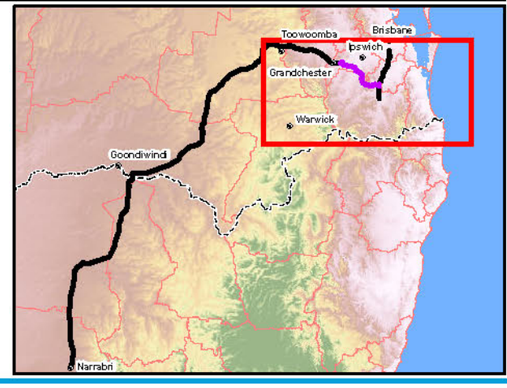
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Map by: MF/LCT/RB/GN \\aubnasp601.aurecon.info\trp\GIS\GIS_3400_C2K\Tasks\3400-EAP-20180903\1214_Social_Impact_Assessment_figures\Figure_4.1_SIA_Study_Area_A3_FFJV_v4.mxd Date: 29/01/2020 11:40

Legend

- 5 Chainage (km)
- Localities
- Existing rail
- B2G project alignment
- G2H project alignment
- H2C project alignment
- C2K project alignment
- K2ARB project alignment
- SA2 boundary
- State Suburb (SSC) boundary
- SIA study area
- Local Government Areas



A3 scale: 1:550,000

0 4 8 12 16 20km

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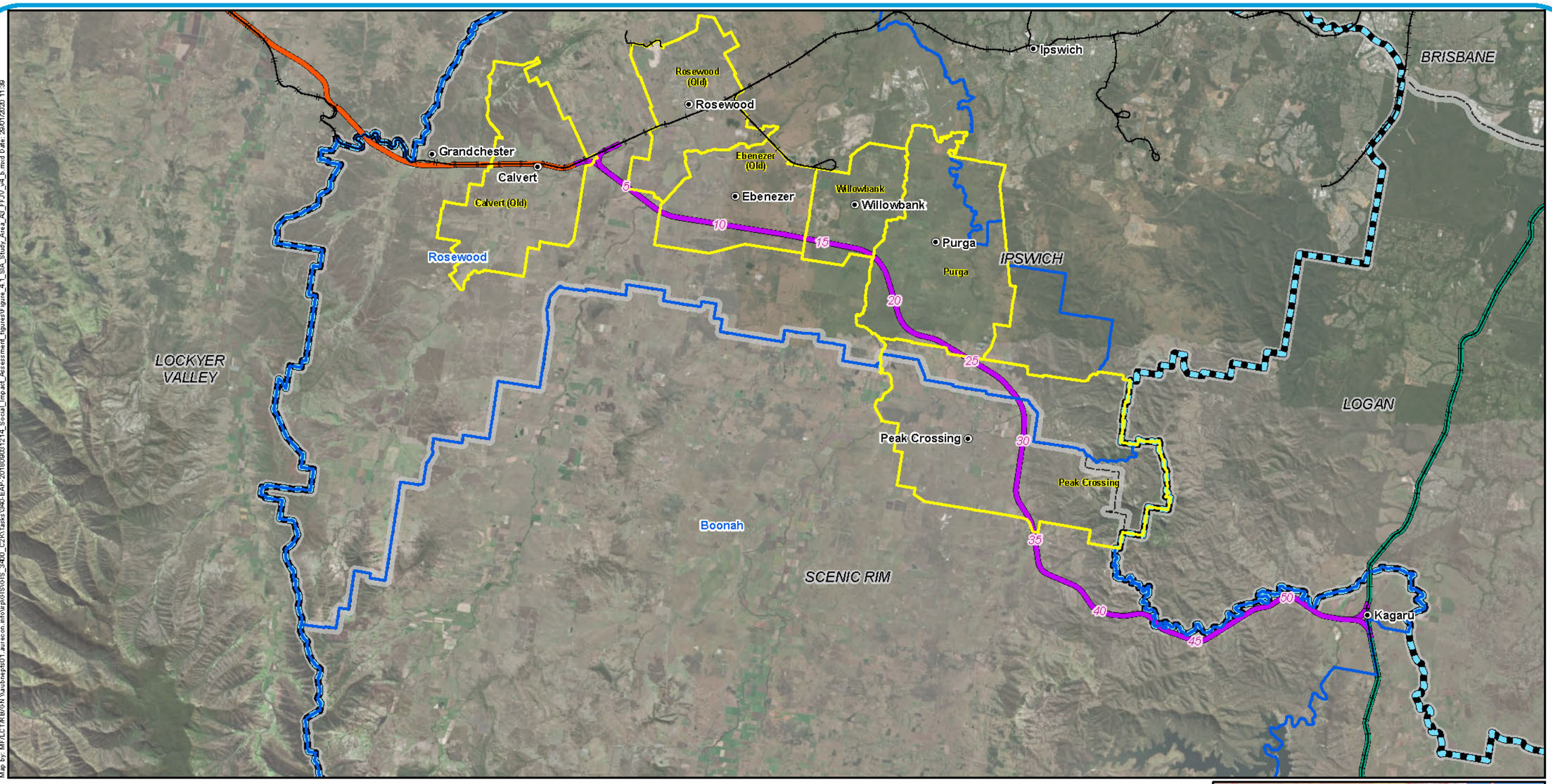
Calvert to Kagaru
Figure 4.1a: SIA study area

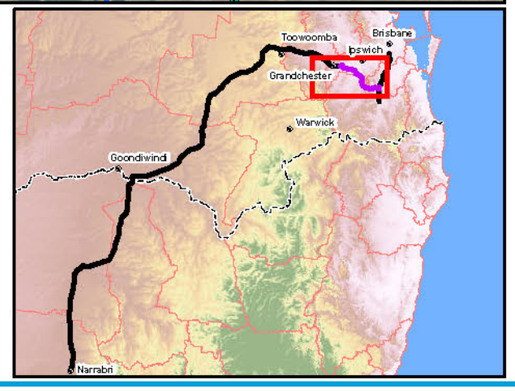
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Map by: MF/LCT/RB/GN \\aubnasp601.aurecon.info\trp\GIS\GIS_3400_C2K\Tasks\3940-EAP-20180903\214_Social_Impact_Assessment_figures\Figure_4.1_SIA_Study_Area_A3_FFJV_r4_b.mxd Date: 29/01/2020 11:39

Legend

- 5 Chainage (km)
- Localities
- Existing rail
- H2C project alignment
- C2K project alignment
- K2ARB project alignment
- SA2 boundary
- State Suburb (SSC) boundary
- SIA study area
- Local Government Areas



A3 scale: 1:200,000

0 2 4 6 8 10km

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Calvert to Kagaru
Figure 4.1b: SIA study area

4.3.2 Potentially affected communities

The Project's impacts on local towns and rural localities will depend primarily on the proximity of the Project to towns and other land uses.

Potentially affected communities include:

- Rural and rural residential areas through which the Project would pass, where there is potential for impacts on e.g. land use, environmental qualities (such as the noise environment or air quality
- Towns near the Project alignment which may be affected by e.g. changes to nearby land uses, road networks, social infrastructure access, or scenic character.

From approximately 1.8 km west of Calvert, the Project progresses in a generally south-easterly direction:

- Though large rural residential properties and grazing properties in Lanefield, Rosewood and Lower Mount Walker
- Through Ebenezer, crossing the Ebenezer Industrial Area, rural residential lots, grazing land, the disused Ebenezer Coal Mine and JNJ Resources (a bentonite product production business)
- Southwest of the Willowbank rural residential community, and 250 m south of the Ipswich Motorsport Precinct
- Though grazing and cropping land in Purga, Peak Crossing and Washpool
- Through rural Undullah, via a tunnel through the Teviot Mountain Range and through grazing land in Kagaru.

For the purpose of analysing communities' population and housing characteristics, State suburbs (SSCs) as defined by the ABS have been used to delineate potentially affected communities, as they include both urban centres and the rural and rural residential areas around them.

Section 5 describes the characteristics of towns and rural localities as the basis for understanding the consequence of social changes resulting from the Project. It includes select demographic indicators for Statistical Area Level 1 (SA1s) within and near the disturbance footprint, and detailed socio-economic data for towns, rural localities and the Ipswich and Scenic Rim LGAs.

Detailed socio-economic data are not provided for localities with less than 200 people, as the consistency of data is constrained by their small populations and ABS confidentiality protocols, however their characteristics are reflected by SA1 level data. The Project is within or adjacent to SSCs as shown in **Table 4-2**. The potential for effects on the nearby rural localities of Mutdapilly (with a population of 308 people in 2016), Mount Forbes (population 263) and Allenview (population 184 people) has also been considered.

Table 4-2: Potentially affected communities, Population 2016

State suburb	Persons
Calvert	310
Lanefield	107
Lower Mount Walker	185
Rosewood	2,835
Ebenezer	317
Willowbank	1,316
Purga	574
Peak Crossing	972

State suburb	Persons
Washpool	95
Woolooman	23
Undullah	45
Kagaru	13

4.3.3 Project region

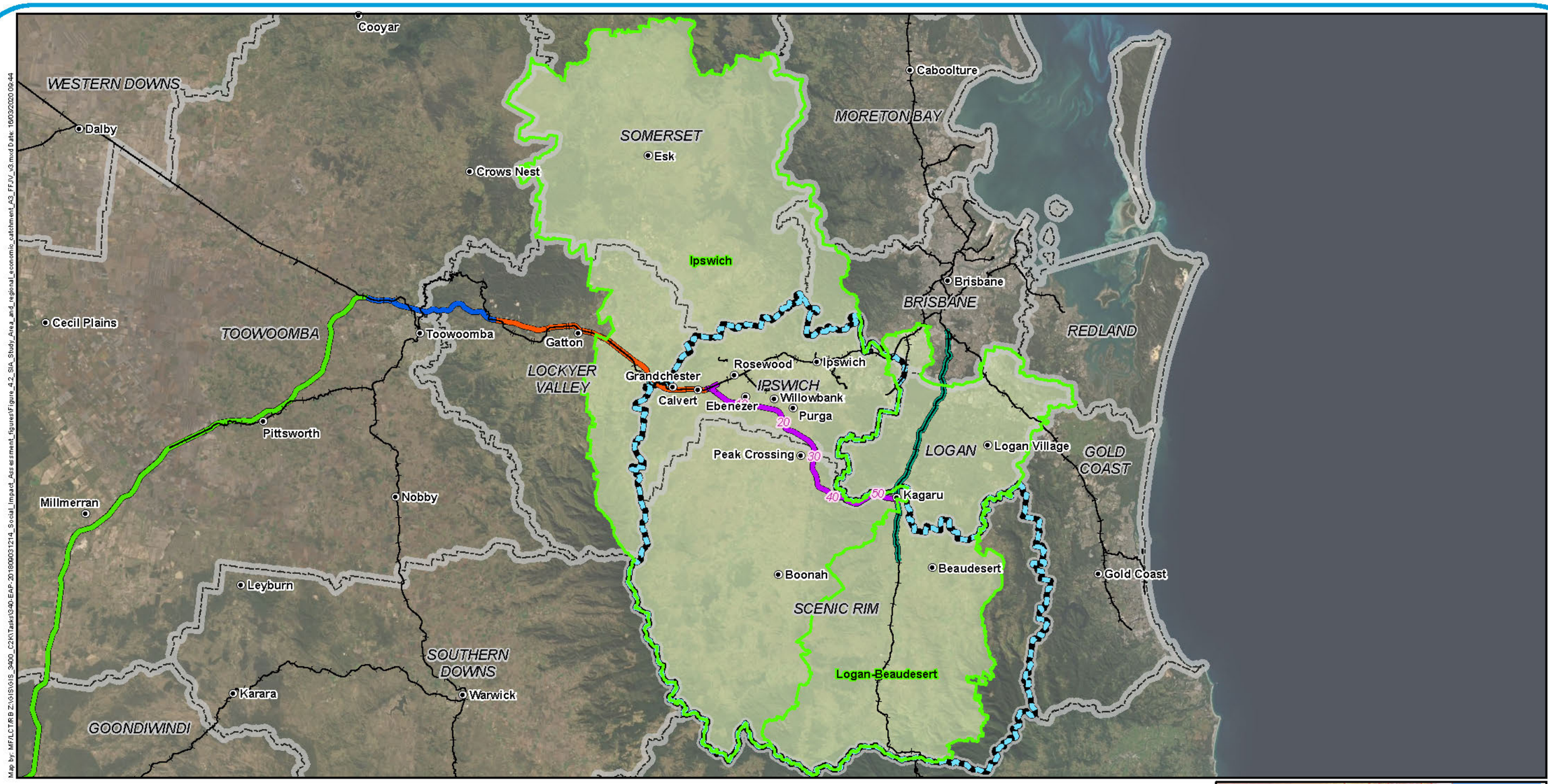
The Project is within the ICC and SRRC LGAs, which represent the Project region. The Project crosses the LGA boundaries at Mt Flinders Road, north of Peak Crossing.

The Project traverses the Logan City LGA for approximately 300 m around Ch 42.8 km to 43.1 km in the unpopulated mountainous area of Undullah. No adverse social impacts are likely in Logan City as a result, so the Logan LGA is not considered in detail in the SIA. The Project is near the Greater Flagstone Priority Development Area (PDA) which is within the Logan LGA, which has been considered in the SIA.

The Project is located within the broader Ipswich and Logan-Beaudesert Statistical Area 4 areas (SA4), with information included in the SIA with regard to the regional workforce (refer Figure 4-2 and **Table 4-3**).

Potential impacts and benefits for other regional communities and/or the State of Queensland relate primarily to the Project's potential to catalyse regional development and economic benefits. EIS Appendix S: Economic Technical Report has defined the Ipswich, Scenic Rim and Logan LGAs as the economic impact assessment study area for assessment of employment and other economic benefits, as the Logan LGA's labour force and businesses are well positioned to contribute to the Project's workforce and supply chain. Appendix S: Economic Technical Report has also provided data and analysis for the Greater Brisbane Statistical Area, recognising that economic benefits would extend beyond the economic impact assessment study area.

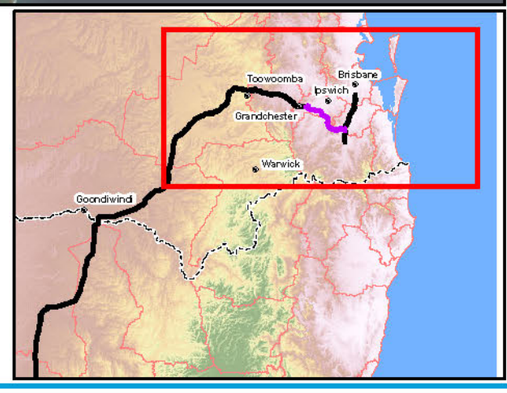
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Map by: MF/LC/TR/BZ:\GIS\GIS_3400_C2K\Tasks\3340-EAP-20180903121 4_Social_Impact_Assessment_figures\Figure_4.2_SIA_Study_Area_and_regional_economic_catchment_A3_FFJV_v3.mxd Date: 16/03/2020 09:44

Legend

- 5 Chainage (km)
- Localities
- Existing rail
- B2G project alignment
- G2H project alignment
- H2C project alignment
- C2K project alignment
- K2ARB project alignment
- SA4 boundary
- SIA study area
- Local Government Areas



A3 scale: 1:830,000

0 6 12 18 24 30 km

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Calvert to Kagaru

Figure 4.2: SIA study area and regional economic catchment

4.3.4 Statistical geography

The ABS Statistical Areas which correspond with local and regional communities are shown **Table 4-3**. Where specific data are not available for SSCs they have been provided for the relevant SA2s of Rosewood and Boonah.

Table 4-3: Statistical geography

Statistical area	Study area	Name	Land area (km^2)
Statistical Area 1 (SA1)	EIS investigation corridor and surrounds within approximately 1 km from the rail alignment	SA1s as show in **Table 5-2**	867.9
State Suburbs (SSC)	Potentially affected communities	Calvert	44.2
		Rosewood	31.4
		Ebenezer	31.8
		Willowbank	20.6
		Purga	56.6
		Peak Crossing	91.6
Statistical Area 2 (SA2)		Rosewood	674.6
		Boonah	2,099.4
Local Government Area	Project region	City of Ipswich	1,085
		Scenic Rim Region	4,252
Statistical Area 4 (SA4)	Broader labour force region	Ipswich	6,681
		Logan-Beaudesert	2,586
Queensland (STE)	Comparator for SIA study area	Queensland	185.3 million

4.3.5 Project stakeholders

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

- Reviewing the outcomes of ARTC's stakeholder engagement to date
- Participation in community information sessions to identify stakeholders' interests and locations
- Desktop analysis of social infrastructure provision and management in potentially affected communities and nearby regional centres
- Identification of Council departments and Government agencies with an interest in the SIA
- Identification of community issues as indicated by community survey responses.

SIA stakeholders, their primary locations and key issues identified in consultation are shown in **Table 4-4**.

Table 4-4: Stakeholder profile

Stakeholder groups	Locations	Key Issues for consideration in assessment
Landholders in and near the disturbance footprint	▪ Calvert ▪ Lanefield ▪ Rosewood ▪ Lower Mount Walker ▪ Ebenezer ▪ Mount Forbes ▪ Goolman ▪ Willowbank ▪ Mutdapilly ▪ Purga ▪ Peak Crossing ▪ Washpool ▪ Kagaru ▪ Undullah ▪ Allenview	▪ Acquisition of properties resulting in displacement of households ▪ Disruption to family lifestyles from noise, dust or property severance ▪ Severance and disruption of agricultural properties ▪ Noise, vibration, visual and connectivity impacts on amenity ▪ Impacts on location or viability of farms and cattle or grazing operations ▪ Potential for flooding patterns to affect farms, homes or environmental values
Community members and groups		▪ Noise, vibration, visual and connectivity impacts on amenity ▪ Potential for flooding patterns to affect farms, homes or environmental values ▪ Impacts on traffic network connectivity as the result of road re-alignments or level crossings ▪ Cumulative noise impacts (particularly at Willowbank) ▪ Potential for rail-related dust to impact on residential amenity or water tanks ▪ Changes to flooding patterns ▪ Impacts on property values or plans ▪ Safety, rail-related hazards and firefighting access ▪ Impacts on traffic safety during construction or operation ▪ Potential for passenger rail inclusion ▪ Impacts on scenic values
Ipswich City Council	▪ Calvert ▪ Lanefield ▪ Rosewood ▪ Lower Mount Walker ▪ Mount Forbes ▪ Goolman ▪ Willowbank ▪ Mutdapilly ▪ Purga ▪ Ipswich	▪ Avoiding or mitigating impacts on vulnerable communities ▪ Impacts of property severance on farmers ▪ Potential for impacts on the amenity of residential communities and rural residential areas ▪ Avoiding creation of any new residential lots ▪ Opportunity for Indigenous business development ▪ Ebenezer intermodal freight facility notes as a key opportunity ▪ Potential to impact on access to or amenity of tourism attractions ▪ Potential for loss of scenic views affecting tourism or residential amenity ▪ Effects of disruption to local roads and services ▪ Community concern regarding the Project's effect on property values

Stakeholder groups	Locations	Key Issues for consideration in assessment
Scenic Rim Regional Council	▪ Peak Crossing ▪ Washpool ▪ Kagaru ▪ Undullah ▪ Boonah ▪ Beaudesert	▪ Potential impacts on tourism values ▪ Maintaining social amenity ▪ Potential to complement Council's focus on the 'future sustainability of the Scenic Rim' in the context of transportation and road network management ▪ LGA exporting workers and there is a lack of local training options ▪ Project represents potential supply opportunities for quarries ▪ Potential to affect viability of transport businesses ▪ Local and Indigenous employment ▪ Potential for road safety impacts, disrupted traffic as a result of Cunningham Highway crossing construction, and potential opportunities for improvement on Ipswich-Boonah Road and Boonah-Beaudesert Road. ▪ Concerns that transportation hubs may cause traffic issues ▪ Community concern regarding the Project's effect on property values
Traditional custodians and Indigenous community members	▪ Native Title claim areas	▪ Impact on Native Title interests or cultural heritage ▪ Land severance or changes to landscapes affecting cultural heritage values ▪ Potential exacerbation of flooding impacts on Native Title interests ▪ Opportunity to improve Indigenous unemployment rates
Community and Government agencies, including education, health and community services	▪ Scenic Rim ▪ Ipswich LGA	▪ Concern about Project's proximity to Grandchester School learning environment and pedestrian and bike access on Mount Mort Road ▪ Implications of Project for community mental health ▪ Limited resources in rural hospitals to cope with increased demand ▪ Existing mental health issues following the impacts of the floods ▪ Concern about how property severance will affect people
Police and emergency services	▪ QPS – Harrisville – Boonah – Rosewood ▪ QFES – Lockyer Somerset Command – Scenic Rim Command	▪ Community tension around land acquisition as people have gone to those areas for lifestyle ▪ Early establishment of relationships with QPS and QFES to mitigate impacts on community safety and demands for service ▪ Potential for protest activity – a police resourcing issue ▪ Traffic safety issues with commuters who aren't familiar with the roads ▪ Cunningham Highway is an existing focus for traffic policing and road closures can cause safety issues ▪ Even with small increases in traffic an increase in fatigue related incidents/animal strike is noticed ▪ Wide load escorts are likely to require considerable resources ▪ Potential for increased calls for service

Stakeholder groups	Locations	Key Issues for consideration in assessment
		▪ Need to maintain access for QFES in and around the disturbance footprint and to nearby communities ▪ Need for close cooperation with QFES and QPS prior to construction
Businesses and business organisations, including tourism businesses	▪ Scenic Rim LGA ▪ Ipswich LGA	▪ Potential effects on tourism values during construction and operation of the Project ▪ Increased employment options desired ▪ Opportunity for quarries to supply Project ▪ Potential for noise and traffic disruptions to affect use of or access to local businesses ▪ Positive impacts for Ebenezer Industrial Area, leading to more local jobs and industry

4.3.6 Community survey inputs

The Inland Rail's Gowrie to Helidon, Helidon to Calvert and Calvert to Kagaru projects were the focus of a SIA community survey undertaken between 31 May and 31 July 2018, with a total of 403 responses received. The four LGAs affected by the three projects have a combined population of approximately 411,000 people. Accordingly, the SIA survey results have limited statistical validity when broken down by LGA, but provide good insights to community values and views about potential Project impacts.

The community survey data of most relevance to the Project includes inputs from 201 residents in the Project region. Of the 199 survey respondents who nominated their home address, 79 people were from the Ipswich LGA, 26 people were from the Scenic Rim LGA and 94 people were from communities on the LGA boundary, including 83 people from Peak Crossing.

Not all respondents answered each survey question. A total of 315 respondents provided their views on potential social impacts and benefits, including 160 respondents from the Scenic Rim and Ipswich LGAs. Figure 4-3 provides a summary of these responses, with a rating of 1 representing the most negative response and 5 the most positive response.

Respondents from the Project region expect negative effects from the Inland Rail Program, with most scores averaging below 2 out of 5.

Lowest scores were provided consistently by Scenic Rim and Ipswich LGA respondents in relation to impacts on housing and property use, and in relation to amenity of towns or farms.

Response ratings with an average above 2 were generally provided by respondents in relation to changes to employment and training options, industry and economic development and local businesses, however, these ratings still rank at the neutral to negative end of the response spectrum.

Some survey respondents noted that more information about the Project (e.g. alignment, structure, commercial use arrangements, employment and supply arrangements) was needed for them to determine the social impacts and benefits for their community.

Survey respondents' concerns were considered in the SIA.

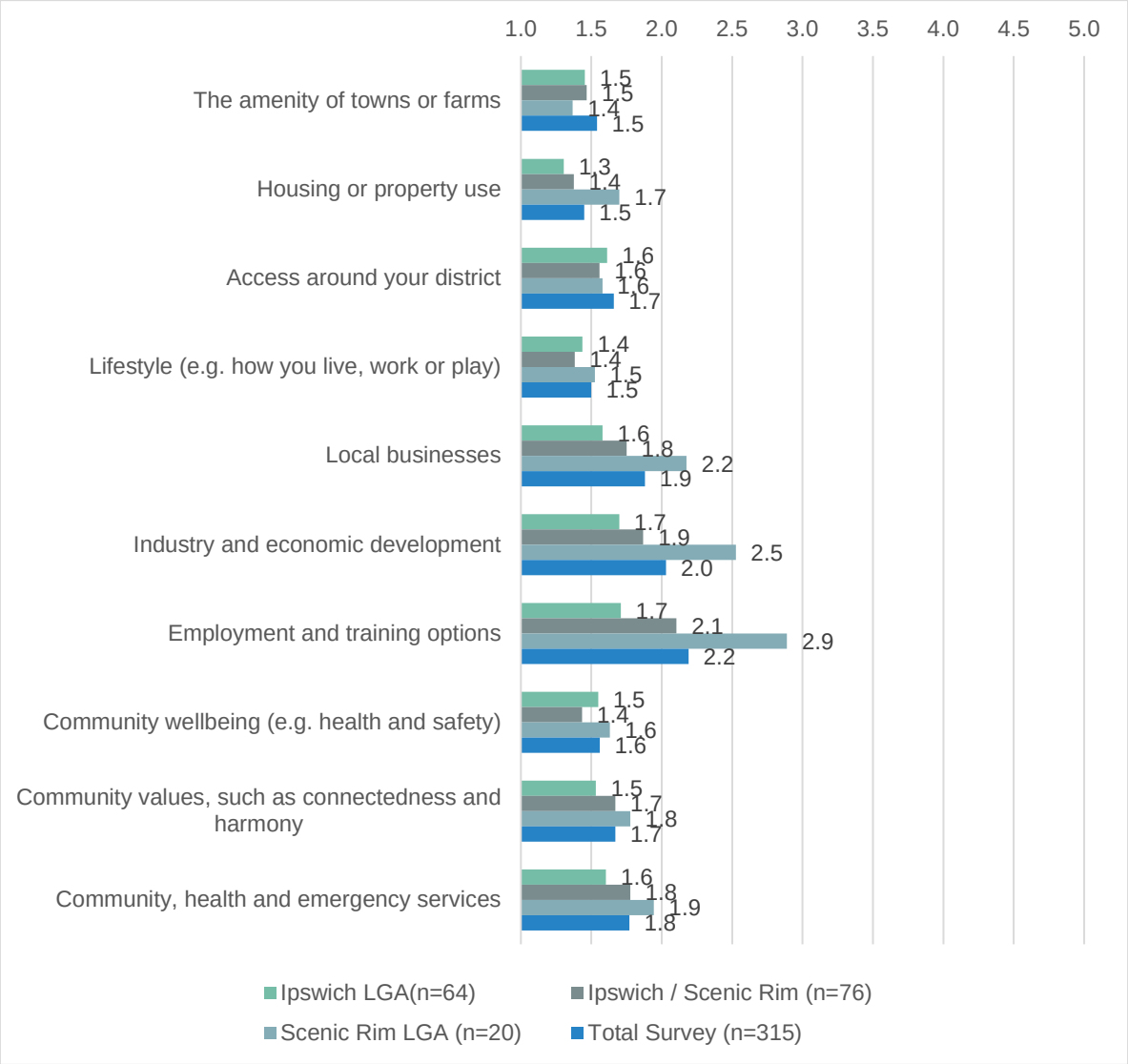


Figure 4-3: Survey respondents' ratings of Project social impacts and benefits

4.4 Scope of potential impacts and benefits

The scope of assessment has been defined based on the considerations outlined in previous subsections. Impacts and benefits to be assessed are summarised in **Table 4-5**.

Table 4-5: Potential social impacts and benefits

Potential impacts/benefits	Section
Community values	
Impacts on Indigenous values	7.1.1
Property acquisition impacts on households and communities	7.1.2
Exacerbation of existing social disadvantage	7.1.3
Changes to amenity or lifestyle	7.1.4
Impacts of construction traffic on rural roads	7.1.5
Loss of community cohesion	7.1.6

Potential impacts/benefits	Section
Impacts on sense of place	7.1.7
Changes to population	7.1.8
Potential to increase flooding risks	7.1.9
Concern about property values	7.1.10
Employment	
Employment opportunities during the construction phase	7.2.1
Employment opportunities during the operations phase	7.2.1
Potential for workforce behaviour to impact on residents	7.2.2
Training and development opportunities	7.2.3
Potential for the Project to contribute to skills shortages	7.2.4
Impacts on employment in other industries	7.2.4
Population, housing and social infrastructure	
Changes to the settlement pattern	7.3.1
Impacts on access to housing	7.3.2
Access to short term accommodation	7.3.3
Community wellbeing	
Potential to affect access or amenity of social infrastructure and emergency services	7.4.1
Impacts on police or emergency services capacity or response times	7.4.1
Noise or air quality which could affect human health	7.4.2
Stress and anxiety due to uncertainty or concern about Project impacts	7.4.3
Interruption of access to recreational areas or water	7.4.4
Impacts on traffic safety or community safety	7.4.5
Business and Industry	
Disruption of local businesses	7.5.1
Impacts on the amenity of tourism facilities or scenic amenity affecting tourism	7.5.2
Impacts on agricultural properties	7.5.3
Impacts on movement of stock and agricultural commodities	7.5.4
Potential for local and regional business to benefit during construction	7.5.5
Facilitation of industrial development with related economic and employment growth	7.5.6
Skills and labour shortages as the result of cumulative demands	7.6

5 Social environment

This section describes the social environment in the SIA study area, including local and regional communities, community values, demographic characteristic, housing, social infrastructure, employment and businesses.

5.1 Settlement pattern

5.1.1 Traditional ownership

Native Title rights and interests may exist over land that is unallocated State land, Crown land, State forests, within national parks or public reserves and some other forms of tenure.

The Project is primarily located on land within the Yuggera Ugarapul People ‘s Native Title claim area, with a very small portion located at the south-eastern boundary of the corridor being in an area claimed by the Jagera Daran People.

5.1.2 Regional communities

Ipswich LGA

Ipswich City and its surrounding area is located on the Bremer River and is Queensland’s oldest provincial city. The LGA is extensive, covering some 1,089 km^2, and is surrounded by Brisbane to the east, the Lockyer Valley to the west, the Scenic Rim and Logan to the south, and Somerset to the north.

The discovery of coal in the area in the late 1820s led to the development of transport lines, using the river initially, until the emergence of rail in the late 1870s. Ipswich was selected as the starting point for Queensland’s first railway to service the wealth of the Darling Downs (ICC 2018). By 2008, only one operating coal mine, the Jeebropilly Mine existed in the Ipswich LGA. (Hatchman, n.d.) RAAF Base Amberley, established in 1940 and operating as Australia’s largest defence air base, is a notable part of the regional character,

Analysis of key industries of employment in the Ipswich LGA (refer Section 5.4.1) indicates that industries such as Health Care and Social Assistance, Retail, Manufacturing and Construction are strong employers in the LGA.

The SEQ Regional Plan has a distinct zoning of urban footprint and regional landscape and rural production on the outskirts of the metropolitan area (Department of Infrastructure Local Government and Planning 2017). The residential land uses align with the rail and road corridor suburbs and townships such as Rosewood.

The SEQ Regional Plan designates Ipswich (with Toowoomba) as a principal regional activity centre for SEQ’s western sub-region. Outcomes sought by the Regional Plan of relevance to the Project include:

- Focusing density along urban corridors and in areas with superior access to public transport, employment and services, including the Ipswich to Rosewood rail transport corridor, Rosewood (identified for growth by expansion), and future urban growth areas in Lanefield and Grandchester
- Growing economic opportunities and synergies through RECs which include the Western Gateway (the intersection of three national highways), the Brisbane West Wellcamp Airport, Toowoomba Enterprise Hub and Inland Rail
- Supporting Ipswich to develop into a major economic hub featuring a diverse mix of economic activities and an emerging industrial corridor to the west, with long-term opportunities for a transport and logistics hub associated with Inland Rail.

Scenic Rim LGA

The Scenic Rim LGA lies between Ipswich and the NSW/Queensland border, inland of the City of Gold Coast. The Local Government area was formed in 2008 following the amalgamation of Boonah Shire, most of Beaudesert Shire and some areas of Ipswich City.

The local economy is driven by primary production and tourism, with a strong sense of history. The area was settled through land selections under State government law in the 1800s and has settlement patterns following the transport routes between Brisbane, Ipswich and the Darling Downs. The Fassifern Valley proved to contain rich agricultural land and townships arose around the road and rail networks (Visit Scenic Rim, n.d.)

The strongest industries of employment are Construction (10.8 per cent), followed by Health Care and Social Assistance (10.5 per cent), Education and Training (9.4 per cent) and Agriculture, Forestry and Fishing (8.8 per cent).

The LGA is characterised by its u-shaped mountain range and fertile valleys and being easily accessed from coastal centres, is popular for tourism and rural living. The SEQ Regional Plan zones the Local Government Area as regional landscape and rural production with limited urban footprints for the larger townships of Beaudesert, Boonah, Kalbar, Aratula, Kooralbyn and Bromelton. The villages of Harrisville and Peak Crossing have small yet defined residential zones.

Irrigated pastures and some more intensive agriculture dominate the floodplains of the Region's major water courses, Warrill Creek and the Bremer River. Similar land use patterns occur around Purga Creek. The predominant land use is native vegetation grazing with conservation and natural environment uses in the range areas (State of Queensland 2018).

The SEQ Regional Plan includes an outcome to develop a region of interconnected communities that moves people and freight efficiently to maximise community and economic benefits, including delivering the SFRC, and supporting delivery of Inland Rail.

5.1.3 Local communities

Calvert

The town of Calvert is located in the City of Ipswich and is approximately 1.8 km west of the Project's connection to the H2C project. The township is dissected by the Main Line rail, Hidden Vale Road, Franklin Vale and Western Creek. Calvert is 26 km south east of Gatton and 25 km south west of the Ipswich city centre. The EIS corridor is within zones mapped as regional landscape and rural production area under the SEQ Regional Plan (Department of Infrastructure Local Government and Planning 2017).

The Ipswich Planning Scheme zones the land as Rural A and B, township residential with limited areas of special uses and special land management (ICC 2017). The primary land use for this area is grazing modified pasture with some areas of irrigated cropping and seasonal horticulture in the floodplain of Western and Franklin Vale Creeks that coincide with the identified strategic cropping area. The majority of the remaining grazing use is over native vegetation. Residential lots have been established in the township area and have been subject to low density development (State of Queensland 2018). The areas surrounding Calvert are considered under the Ipswich Planning Scheme to be constrained by factors such as good quality agricultural land and flood prone land. The area is also designated as Future Investigation Areas with potential for development as an urban area within the existing lots surveyed within the township boundaries.

Lanefield and Lower Mount Walker

The Project passes through the rural localities of Lanefield and Lower Mount Walker, located to Calvert's south. Land use in this area is typically of a rural nature, with most properties consisting of large-lot grazing areas. The primary land uses are grazing modified pasture with some areas of irrigated cropping and seasonal horticulture in the floodplain of Western and Franklin Vale Creeks. The majority of the remaining grazing use is over native vegetation. The Ipswich Planning Scheme zones the land as Rural A and B, township residential with limited areas of special uses and special land management (ICC 2017).

Rosewood

Rosewood is a regional town approximately 3.4 km east of the Project's connection to the West Moreton System, some 17 km west of Ipswich. At Rosewood the Queensland Rail (QR) West Moreton system connects to the QR South East Queensland Network. Rosewood is dissected by the railway line and local roads connecting Laidley to the west and Marburg to the north and bounded to the south by the Bremer River. The township and surrounding locality are zoned as urban footprint and regional landscape and rural production respectively (Department of Infrastructure Local Government and Planning 2017).

In the 1840s a track between Ipswich and Toowoomba developed south of an area of rosewood scrub, from which the town is believed to have received its name (Ipswich City Council, 2018). The railway built through the area in 1865 brought development to the Rosewood area and in 1860s settlers were encouraged to the area, with sawmilling, mixed farming and dairying established near the railway corridor. By 1877 coal mining commenced in the Walloon area and brought more people to the area.

The Ipswich Planning Scheme zones land in and around Rosewood as Rural A and B, residential lots of low, medium, character mixed density and large lots, town centre with limited areas of special uses and special land management. Recreation areas, showgrounds and urban investigation area zonings fringe the township (ICC 2017). The Ipswich Planning Scheme considers the areas surrounding Rosewood as constrained by past mining activities, future resource areas, areas of ecological significance good quality agricultural land and areas of poor drainage some of which are flood prone (ICC 2017). Notwithstanding, the Rosewood area is planned as a future 'growth through expansion' area under the SEQ Regional Plan.

Ebenezer, Mount Forbes and Mutdapilly

The Project crosses the Ebenezer Industrial Development Area, approximately 1 km south of the rural residential area. Ebenezer is 16 km southwest of Ipswich. The area is dissected by the Bremer River to the west and Paynes Road. Ebenezer is characterised by predominantly rural and rural-residential land uses, with a considerable amount of remnant vegetation.

The Ebenezer locality is a transition from the regional landscape and rural production to urban footprint and development zones of the SEQ Regional Plan (Department of Infrastructure Local Government and Planning 2017). The Ipswich Planning Scheme denotes the area as rural pastoral and living (Rural B and C) and regional business and industry buffer surrounding the Jeebropilly Coal Mine and Ebenezer Coal Mine (ICC 2017).

The Project passes approximately 1 km south of the Mount Forbes rural residential area, with the rural locality of Mutdapilly close by to the west of Mount Forbes. The rural living blocks in and around Mount Forbes Road represent a lifestyle development consistent with the Ipswich Planning Scheme providing housing close to rural or urban centres (ICC 2017).

Willowbank

The Project passes through Willowbank, approximately 250 m south to the south of the Ipswich Motorsport Park and 3 km southwest of the Willowbank rural residential community. Willowbank is 14 km southwest of the Ipswich City centre and is bounded by the Cunningham Highway to the east and dissected by Ebenezer Creek. Land uses include residential, mining and transitional use, recreational uses, grazing, conservation and natural environments (State of Queensland 2018). Willowbank includes historic coal and bentonite mining.

Willowbank was named for the sheep and cattle station established in the area in the early 1800s, which was subdivided in 1890 to become the Willow Bank Estate (Ipswich City Council, 2017).

The SEQ regional plan zones the Willowbank area as urban footprint and as a regional development area (Department of Infrastructure Local Government and Planning 2017). The Ipswich Planning Scheme zoning is mostly for regional business and Industry investigation areas, although some residential lots exist (ICC 2017).

Purga

The Project traverses the southwestern boundary of the Purga rural locality. Purga is dissected by the Warrill and Purga Creeks, Cunningham Highway and Ipswich - Boonah Road. The Project traverses the Purga Nature Reserve which offers facilities including a bushwalking track. There is no consolidated township in Purga, the nearest being Yamanto to the northeast.

A railway station was opened at Purga in 1882 on the line between Ipswich and Harrisville. The nearby Deebing Creek Aboriginal Mission opened in 1887 (Centre for the Government of Queensland 2018) and in 1915 the residents were moved to a new mission reserve at Purga. On 30 June 1948 the Purga mission was closed and the reserve status of the land was rescinded. An Aboriginal cemetery at Purga was gazetted in March 1968 (SLQ 2018).

The SEQ Regional Plan describes the area in Purga which is traversed by the Project as regional landscape and rural production area (Department of Infrastructure Local Government and Planning 2017). The Ipswich Planning Scheme zones the area primarily for rural uses of agriculture, pastoral, conservation and special uses (Rural A, B, D and E respectively) aimed to maintain the agricultural use of the land and character of nearby area (ICC 2017). Land uses are predominantly production from irrigated or dryland agriculture, grazing native or modified pastures with limited intensive animal production or irrigated horticulture (vine fruits) and mining/extractive industries (State of Queensland 2018).

Peak Crossing and Washpool

The Project passes approximately 2.2 km to the east of the town of Peak Crossing. The area between Purga and Peak Crossing contains a mixture of land uses, including rural-residential properties and agricultural estates, poultry farms, the Yackatoon Grazing Company Feedlot, the Purga Breeder Farm, Purga Quarry, Gibb Brothers farming operations and Ivory's Rock Conventions and Events Centre (IRCEC).

Peak Crossing is bounded by Teviot Range inclusive of Flinders Peak (679 m) to the east and Warrill Creek (East Branch) to the west and is 20 km south of central Ipswich. The township of Peak Crossing is surrounded by rural lots.

The village was settled in the 1860s following the issue of farm selections and the location was named for the point of crossing Purga Creek. The area had a brief period of cotton growing and the town grew around the hotel, store and cotton gin. The rail line from Ipswich to Harrisville opened in 1882 with a stop at Peak Crossing but closed in 1964 (ICC 2018). Dwellings associated with early settlement and worship have been listed as character places under the Ipswich Planning Scheme. The Peak Crossing State School, 2.5 km south-west of the Project on Ipswich-Boonah Road is located at the crossing for which the township is named.

The SEQ Regional Plan describes the village as urban footprint and its surrounds as regional landscape and rural production (Department of Infrastructure Local Government and Planning 2017). Land uses include residential, school/community services, manufacturing/industrial, production from irrigated agriculture and modified pastures, irrigated vine fruits, mining/quarries and grazing native vegetation, conservation and natural environments.

The Ipswich-Boonah Road dissects the village and surrounding area, and borders the rural locality of Washpool to the south, the nearest village to Peak Crossing. Washpool is characterised by predominantly vegetated mountainous areas in the east and rural land uses in the west.

Woolooman and Undullah

The Project passes through the rural localities of Woolooman and Undullah. Throughout the Woolooman area (in the east of the EIS investigation corridor) and the Teviot Range (Flinders Peak Conversation Park), terrain is of a rugged nature and there is minimal development apart from grazing properties. The area is dissected by Dugandan and Woollaman Creeks, and Wyaralong Dam is located to the south.

Undullah is a locality that lies across the Teviot Range with no distinct population centre. The SEQ Regional Plan zones the area as regional landscape and rural production (Department of Infrastructure Local Government and Planning 2017). The Boonah Shire Plan describes the entire area as Rural Zone. The land uses are predominantly grazing native vegetation (State of Queensland 2018).

Allenview is a rural locality with no population centre to the south of Kagaru. where the predominate land use is grazing. The disturbance footprint does not affect the Allenview locality.

Kagaru

The Project ends in Kagaru, which is a locality on the eastern side of the Teviot Range with no population centre. Kagaru is predominantly rural land used for cattle grazing and is located within the Bromelton SDA. The area is dissected by Teviot Brook and Woollaman Creek, and the western side is bounded by the Sydney to Brisbane Interstate Railway.

The SEQ Regional Plan describes the area as regional landscape and rural production (Department of Infrastructure Local Government and Planning 2017). The Boonah Shire Plan describes the entire area as Rural Zone. The land uses are predominantly grazing native vegetation, production from irrigated agriculture (including sown pasture) and limited Mining/Quarry (State of Queensland 2018). Kagaru was named in 1930 by the railway department. Wyaralong Dam is located to the south of Kagaru.

Greater Flagstone Priority Development Area

The Greater Flagstone PDA is located north of the Project near the interchange with K2ARB, north of the Bromelton SDA. Greater Flagstone is located within Logan City, west of Jimboomba and the Mount Lindesay Highway, along the Sydney to Brisbane Interstate Railway. It covers a total area of 7,188 hectares (ha). When fully developed, it is anticipated that the Greater Flagstone PDA will provide approximately 50,000 dwellings to house a population of up to 120,000 people.

The Project would not directly affect the Greater Flagstone PDA. However, the EIS investigation corridor overlaps areas within the PDA which are designated for the Flinders Town Centre (district centre), District Sports Parks and Open Space Corridors. The potential for any impacts on the amenity of this area is considered in the SIA.

5.1.4 Other projects in the SIA study area

The Project is part of the Inland Rail Program which has inter-regional, State and national social impacts and benefits. The Project adjoins Inland Rail's H2C project (to the Project's west) and the K2ARB project (to the Project's east). Cumulative impacts on amenity and/or connectivity may occur for communities in the Ipswich and Scenic Rim LGAs as the result of the construction and operation of the three Inland Rail projects.

Other projects in or near the SIA study area whose impacts may interact with those of the Project are shown in **Table 5-1**. A map showing the location of these projects is provided in EIS Chapter 22: Cumulative Impacts.

Regional and inter-regional impacts are also possible in relation to the construction of other rail projects in SEQ. Potential cumulative social impacts are discussed in Section 7.6.

Table 5-1: Major projects in SIA study area

Project	Location	Description
Inland Rail - Helidon to Calvert	Connection of the rail alignment from Helidon to Calvert	This section uses the existing rail corridor and the Gowrie to Grandchester protected rail corridor, with possible refinements being considered within a defined the EIS investigation corridor.
Inland Rail - Kagaru to Acacia Ridge and Bromelton	Connection of the main rail alignment south/south-east of Calvert to Kagaru	This section will enhance and connect the existing rail corridor (approximately 49 km) from north-east of Kagaru to Acacia Ridge and from south of Kagaru to Bromelton.
Greater Flagstone PDA	Within Logan City LGA, west of Jimboomba, along the Sydney to Brisbane Interstate Railway and north of the Bromelton SDA	When fully developed, it is anticipated that the Greater Flagstone PDA will provide approximately 50,000 dwellings to house a population of up to 120,000 people.
Bromelton SDA	South of Kagaru in Bromelton	Delivery of critical infrastructure within the Bromelton SDA will support future development and economic growth. This includes a trunk water main, the Beaudesert Town Centre Bypass and Bromelton North South Arterial Road. This provides opportunities to build on the momentum of current development activities by major landholders in the SDA.
Ripley Valley PDA	Approximately 5 km south-west of the Ipswich Central Business District (CBD) and south of the Cunningham Highway	The Ripley Valley PDA covers a total area of 4,680 ha and is an opportunity to provide approximately 50,000 dwellings to house a population of approximately 120,000 people. It is located in one of the largest industry growth areas in Australia and offers opportunities for further residential growth to meet the region's affordable housing needs.
Ebenezer Regional Industrial Area	South of Ipswich on a 5,000 ha site	The area has been declared under the Queensland Government's SEQ Regional Plan 2009–2031 as a regional development area. It will accommodate manufacturing and logistics businesses as well as difficult-to-locate, large footprint industries.
RAAF Base Amberley future works	RAAF Base Amberley	Current and future upgrades to RAAF Base Amberley are planned.
South West Pipeline	Between Flagstone and Beaudesert	SEQWater is investigating a bulk water pipeline connection from the Southern Regional Water Pipeline to Beaudesert, connecting Beaudesert to the South East Queensland Water Grid.

Project	Location	Description
Remondis Waste to Energy Facility	Swanbank, east of Calvert	This facility will include processes to allow for the recovery of a range of recyclable products for processing and recycling, with waste material which cannot be recovered or recycled utilised for Waste to Energy activities.

5.2 Community profile

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

- The SA1s traversed by the disturbance footprint
- Potentially impacted communities
- The LGAs of Ipswich City and Scenic Rim Region (the Project region).

Of note, the 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 by small amounts from table totals.

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

- Index of Relative Socio-Economic Advantage and Disadvantage (IRSAD) (this section)
- Index of Education and Occupation (IEO) (refer Section 5.7.2).

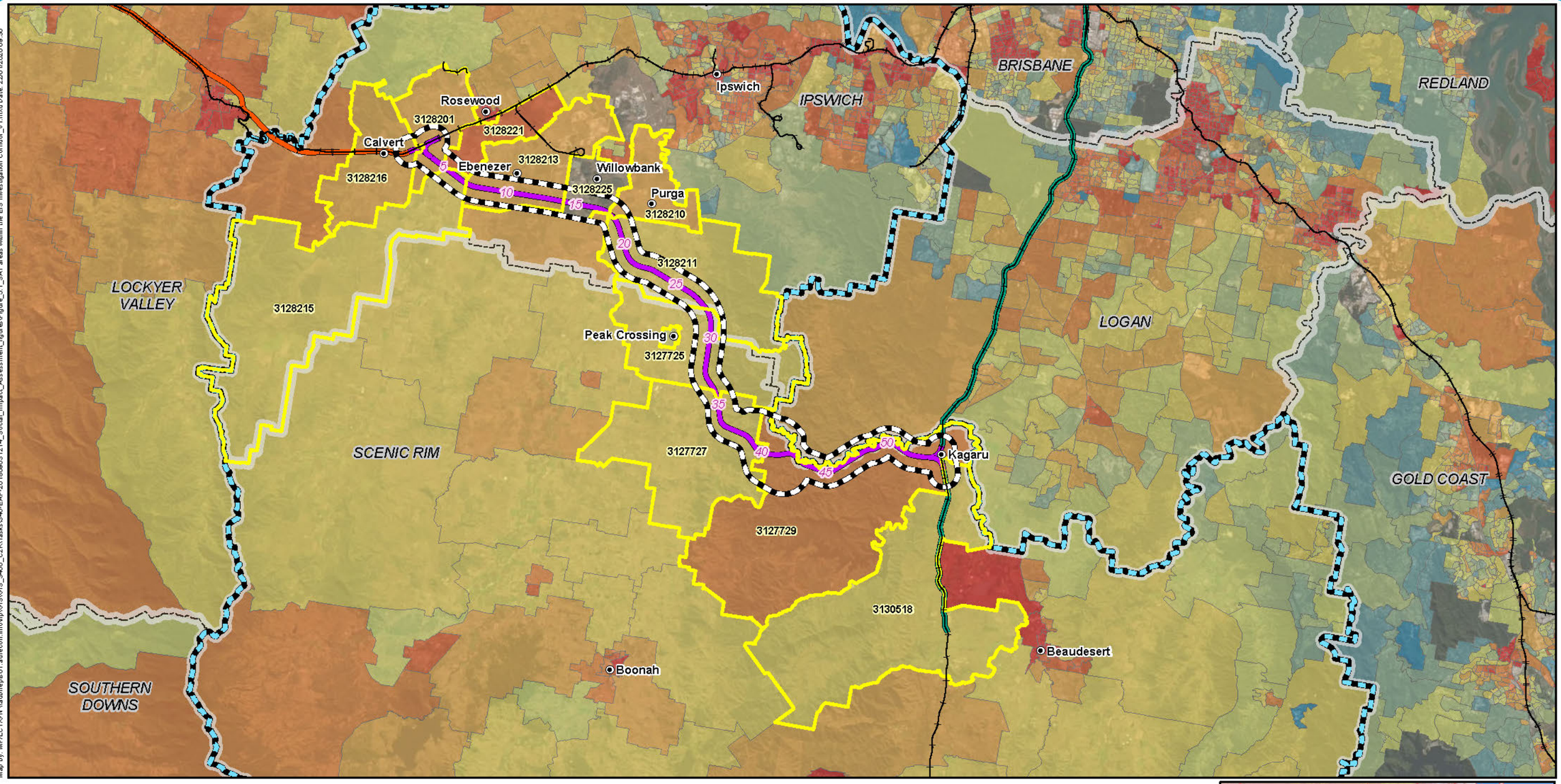
5.2.1 Disturbance footprint

The smallest geographic area for which ABS generally provides demographic data is the SA1. State suburbs (as defined in Section 4.3.4) may contain several SA1s. Figure 5-1 shows the EIS investigation corridor in context with the 12 SA1s through which it passes.

Key characteristics of the SA1s are shown in **Table 5-2**. The SA1s represent a total area of 867.9 km^2, within which there were approximately 1,638 dwellings and a population of 3,421 people in 2016 (an increase of 147 people since 2011 or 4.5 per cent overall). Population density in all but one of the 12 SA1s was very low, with less than 10 people per km^2.

The SEIFA IRSAD index indicates there is potential for disadvantage in areas near the disturbance footprint - only three of the SA1s had scores higher than the Queensland standardised score, whilst six SA1s had IRSAD scores within the 2nd to 4th deciles. The lowest scores were seen in SA1 3128221 which corresponds to the area south of Rosewood, and SA1 3127729 which corresponds to the Kagaru area.

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

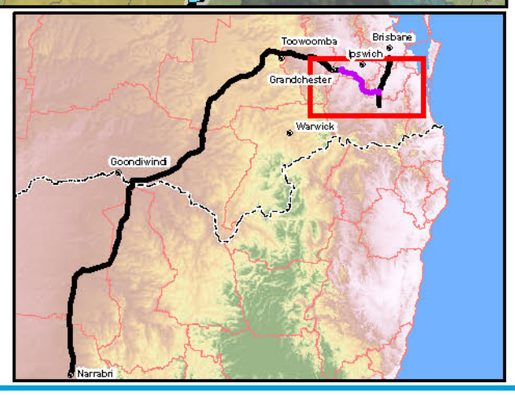


Legend

- 5 Chainage (km)
- Localities
- Existing rail
- H2C project alignment
- C2K project alignment
- K2ARB project alignment
- EIS investigation corridor
- SA1 boundary
- SIA study area
- Local Government Areas

SIEFA IRSAD score

- Decile 1 (most disadvantaged)
- Decile 2
- Decile 3
- Decile 4
- Decile 5
- Decile 6
- Decile 7
- Decile 8
- Decile 9
- Decile 10 (most advantaged)



A3 scale: 1:300,000

0 2 4 6 8 10km

Future Freight
Integrating Community, Environment and Engineering

Issue date: 21/01/2020 Version: 0
Coordinate System: GDA 1994 MGA Zone 56

Calvert to Kagaru

Figure 5.1: SA1 areas within the EIS Investigation Corridor

Table 5-2: SEIFA Scores and population change in SA1s within EIS investigation corridor

SA1 Number	Area (km)	Population (2011)	Population (2016)	Population Change (2011 - 16	Population density (persons/km)	No. dwellings	SEIFA IRSAD	
							Score	Decile
3128216	44.2	281	313	11.4%	7.1	114	982	4
3128201	29.2	235	229	-2.6%	7.8	229	978	4
3128221	20.2	239	348	45.6%	17.2	348	885	2
3128215	149.3	264	253	-4.2%	1.7	108	1007	5
3128213	48.2	386	323	-16.3%	6.7	122	967	4
3128225	16.3	45	38	-15.6%	2.3	11	-	-
3128210	24.9	240	238	-0.8%	9.5	87	972	4
3128211	72.1	362	387	6.9%	5.4	146	990	5
3127725	63.6	369	383	3.8%	6.0	135	1006	5
3127727	88.3	485	503	3.7%	5.7	187	1005	5
3127729	154.5	61	67	9.8%	0.4	23	929	3
3130518	157.2	307	339	10.4%	2.2	128	996	5
Total	**867.9**	**3,274**	**3,421**	4.5%	**-**	**1,638**	**-**	**-**

Source: ABS Census 2016

5.2.2 Local and regional population

In 2016, the Scenic Rim LGA had a population of 40,078 people, which was an increase of 3,621 people or 9.9 per cent since 2011. The Ipswich LGA's population was almost five times larger (at 193,737 people) and had increased between 2011 and 2016 by approximately 26,386 people, or 16.1 per cent over the five years (refer **Table 5-3**).

The Rosewood State Suburb (equating to the township and surrounds) was the most populous at 2,835 people in 2016, followed by Willowbank with 1,254 people. Calvert, Ebenezer, Peak Crossing and Purga had populations ranging from 310 to 972 people (ABS 2016). Peak Crossing experienced the largest population growth over the five years at 203 people or 26.4 per cent. Ebenezer experienced the largest decrease at 69 people or 17.9 per cent, whilst the other suburbs had moderate rates of growth at 3.2 per cent – 9.5 per cent over the five years (ABS 2016).

These data indicate that the potentially affected communities are generally small (with populations ranging from 283 people in Calvert to 2,746 people in Rosewood) and as outlined in Section 5.2.5, there are higher proportions of seniors. Small communities in semi-rural areas, are often self-reliant, but typically have less to access support services or information to help them cope with change. This will require specific attention to communication methods (e.g. face to face) and access to support services for people who may be affected by the Project.

Table 5-3: Population Change 2011 – 2016 (number and five-year change)

Statistical Area	Persons		Change 2011-2016	
	2011	2016		
	No.	No.	No.	%
Calvert	283	310	27	9.5
Rosewood	2,746	2,835	89	3.2
Ebenezer	386	317	-69	-17.9

Statistical Area	Persons		Change 2011-2016	
	2011	2016		
Willowbank	1,254	1,316	62	4.9
Peak Crossing	769	972	203	26.4
Purga	601	574	-27	-4.5
Ipswich LGA	166,903	193,737	26,834	16.1
Scenic Rim LGA	36,457	40,078	3,621	9.9
Queensland	*4,332,739*	*4,703,193*	*370,454*	*8.6*

Source: ABS Census 2016

Indigenous population

The Ipswich LGA had a slightly higher percentage of Indigenous people (4.4 per cent) than the Queensland average (4.0 per cent) in 2016, whilst Scenic Rim LGA's percentage was lower than the Queensland average (3.1 per cent). Percentages of Indigenous people were higher than the State average of 4.0 per cent in Calvert (7.1 per cent), Rosewood (5.4 per cent) and Ebenezer (4.4 per cent) (refer **Table 5-4**).

The Project region's Indigenous population includes high percentages of young people, with 39.3 per cent of Ipswich's Indigenous population aged 0 to 14 years (compared to 23.1 per cent of non-Indigenous persons) and 39.9 per cent of Scenic Rim's Indigenous population aged 0 to 14 years (compared to 18.4 per cent of non-Indigenous persons) (QGSO, 2019).

Indigenous people aged 15 years and over were less likely to have a non-school qualification (in the Ipswich LGA, 42.8 per cent of Indigenous persons compared to 52.7 per cent of non-Indigenous persons, and in the Scenic Rim LGA, 44.9 per cent of Indigenous persons compared to 53.4 per cent of non-Indigenous persons).

In 2016, the unemployment rate for Aboriginal and Torres Strait Islander persons was 19.8 per cent in the Ipswich LGA compared to 8.7 per cent for non-Indigenous persons, and was 14.5 per cent for Indigenous persons in the Scenic Rim LGA compared to 6.1 per cent for non-Indigenous persons.

At the Census in 2016, 584 Indigenous people in Ipswich, and 61 Indigenous people in the Scenic Rim LGA were unemployed

In combination, these factors, along with Indigenous consultation participants' strong focus on employment opportunities, and unemployment data as shown in Section 5.4, confirm the likely availability of local Indigenous people who would be interested in Project employment.

Table 5-4: Indigenous people, 2016 (number and percentage)

Statistical Area	Indigenous people	
	No	% of total population
Calvert	22	7.1
Rosewood	154	5.4
Ebenezer	14	4.4
Willowbank	43	2.6
Purga	12	2.1
Peak Crossing	18	1.9
Ipswich LGA	8,429	4.4

Statistical Area	Indigenous people	
	No	% of total population
Scenic Rim LGA	1,225	3.1
Queensland	*186,482*	*4.0*

Source: ABS Census 2016

5.2.3 Population growth

Estimates of population change and forecasts at the SA2 and LGA levels between 2011-12 and 2026 are shown in **Table 5-5**.

The populations of the Ipswich and Scenic Rim LGAs grew fairly steadily between 2011-12 and 2016-17, at annual rates of between 1 per cent and 3.5 per cent. Ipswich LGA experienced faster growth over this period and is expected to continue to grow more rapidly as the extensive Ripley Development Area and other residential developments are completed. Population growth will need to be supported by commensurate growth in employment in the Project region, which could be facilitated by the Inland Rail Program.

Growth of 30.2 per cent is expected in the Ipswich LGA between 2021 and 2026, compared to 11.8 per cent in the Scenic Rim LGA (QGSO 2017).

The Rosewood and Boonah SA2s experienced minimal to no population growth from 2011 to 2016-17, however the Rosewood SA2 is forecast to grow strongly at 59.8 per cent between 2021 and 2026 (refer **Table 5-5**). The Boonah SA2 is forecast to increase its population slowly between 2016-17 and 2026.

Table 5-5: Population change 2011-12 to 2021-26 (%)

Statistical Area	2011-12	2012-13	2013-14	2104-15	2015-16	2016-17	2017-21	2021-26
	%	%	%	%	%	%	%	%
Boonah SA2	0.5	1.1	2.9	0.0	1.0	3.6	5.2	7.6
Rosewood SA2	0.4	-2.6	0.1	1.6	3.2	-1.0	30.4	59.8
Total	*1.0*	*0.9*	*2.4*	*1.0*	*1.8*	*1.6*	*12.7*	*21.3*
Ipswich LGA	3.5	3.1	3.1	2.7	2.9	3.2	13.8	30.2
Scenic Rim LGA	1.4	2.0	3.0	1.1	1.6	1.9	9.8	11.8
Total	*3.5*	*3.1*	*3.1*	*2.7*	*2.9*	*3.2*	*13.8*	*30.2*

Source: QGSO 2017

Figure 5-2 shows the net effect of forecast growth rates between 2017 and 2026. By 2021, the Scenic Rim LGA is predicted to be home to more than 51,000 people, whilst Ipswich's population in 2026 is expected to reach more than 306,000 people. The Boonah SA2 population is forecast to increase slowly to approximately 13,800 people by 2026, whilst the Rosewood SA2's population is expected to double between 2017 and 2026 to more than 25,000 people.

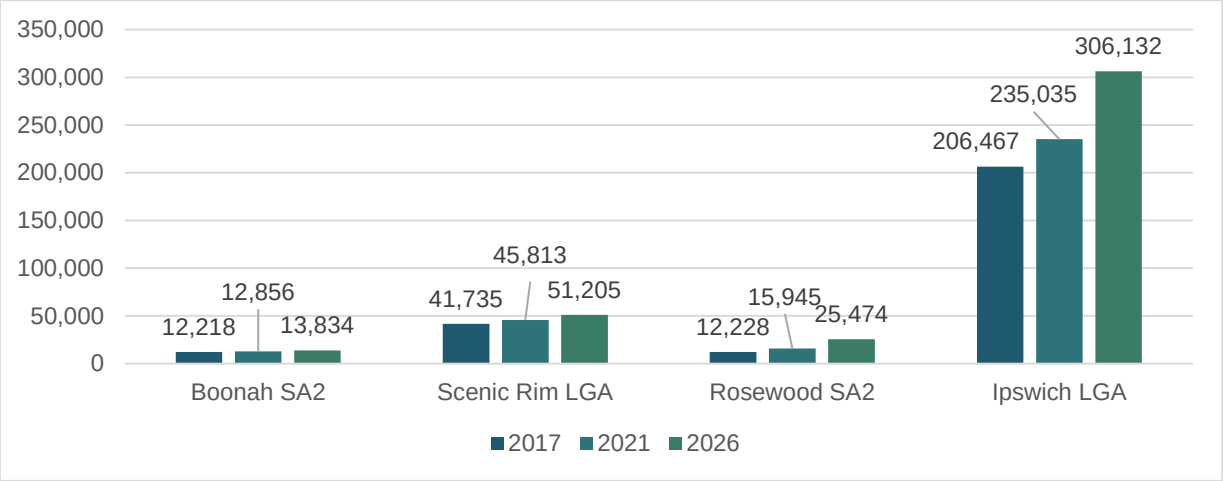


Figure 5-2: Future population growth in the Project region 2017-2026

5.2.4 Families and households

Family types in the Project region in 2016 are shown in **Table 5-6**. The Scenic Rim LGA recorded a high proportion of couple only households (44.7 per cent) which is indicative of the older age profile and likely drift of younger people to larger centres. A much lower 31.7 per cent were couple only families in Ipswich LGA.

Consequently, Ipswich recorded a higher percentage of couple with children families (45.7 per cent) than the Scenic Rim LGA (39.4 per cent). However, almost 21 per cent of families in the Ipswich LGA were sole parent families, compared to the Scenic Rim LGA at 14.8 per cent (ABS 2016).

The highest percentage of couple with children families was recorded in Peak Crossing (50.9 per cent), reinforcing the importance of ensuring safety and good amenity in this area. More than 26 per cent of Rosewood's families were sole parent families in 2016, which indicates vulnerability to changes in social conditions such as housing access and living costs, whilst all other suburbs except Calvert (18 per cent) had lower percentages of sole parent families than the State average (ABS 2016).

Within Queensland, 39.4 per cent of families identified as couple only, 42.5 per cent were couple with children and 16.5 per cent identified as sole parent families.

Table 5-6: Family type 2016 (% of all families)

Statistical Area	Couple Only	Couple with Children	Sole Parent Family	Other Family	Total
	%	%	%	%	%
Calvert	38.2	43.8	18.0	0.0	100
Rosewood	37.7	34.6	26.3	1.4	100
Ebenezer	47.8	39.1	13.0	0.0	100
Willowbank	37.6	45.0	16.0	1.5	100
Purga	41.4	46.9	11.7	0.0	100
Peak Crossing	35.7	50.9	11.2	2.2	100
Ipswich LGA	31.7	45.7	20.9	1.7	100

Statistical Area	Couple Only	Couple with Children	Sole Parent Family	Other Family	Total
Scenic Rim LGA	44.7	39.4	14.8	1.1	100
Queensland	39.4	42.5	16.5	1.6	100

Source: ABS Census 2016

Table 5-7 identifies the household types in the Project region at the 2016 Census. The Ipswich LGA had a higher percentage of family households (71.7 per cent) compared to the Scenic Rim LGA (69.5 per cent) which had a slightly higher percentage of lone person households (20.3 per cent) compared to the Ipswich LGA (19 per cent). This is indicative of its older population and indicates the potential for vulnerability with respect to changing social conditions, particularly access to services.

Peak Crossing recorded the highest percentage of family households (83.9 per cent), whilst Willowbank recorded the lowest (62.9 per cent), due to its high percentage of lone person households (28.5 per cent).

Within Queensland 71.8 per cent of households were family, 23.5 per cent were lone person households and 4.7 per cent identified as group households. (ABS Census 2016)

Table 5-7: Household types 2016 (% of all households)

Statistical Area	Family household	Lone person household	Group household	Other	Total
	%	%	%	%	
Calvert	77.2	14.9	0.0	7.9	100
Rosewood	67.0	23.7	3.0	6.4	100
Ebenezer	67.0	17.9	4.5	10.7	100
Willowbank	62.9	28.5	2.3	6.2	100
Purga	76.0	13.0	2.0	9.0	100
Peak Crossing	83.9	10.1	2.0	4.0	100
Ipswich LGA	71.7	19.0	3.3	6.0	100
Scenic Rim LGA	69.5	20.3	2.3	7.9	100
Queensland	71.8	23.5	4.7	-	100

Source: ABS Census 2016

5.2.5 Demographic characteristics

Age and gender

In 2016, within the Ipswich LGA, 49.4 per cent of the population identified as male, whilst 50.6 per cent identified as female (refer **Table 5-8**). The distribution was similar in the Scenic Rim LGA, with 49.3 per cent of the population identified as male and 50.7 per cent as female. Local communities also recorded a reasonably even distribution of male and females, with the largest discrepancy recorded in Rosewood with 46.7 per cent of the population identifying as male and 53.3 per cent as female.

The median age in the Ipswich LGA did not change from 32 years during 2011-2016 but increased by two years in the Scenic Rim LGA to 44 years (compared to Queensland's median age change of 36 years to 37 years). New residential development in the Ipswich LGA is likely to be contributing to the higher proportion of young people there when compared to the Scenic Rim LGA, where far less residential development is occurring. Greater change in median age occurred within the State suburbs, with the largest change in Calvert (from 39 years to 45 years) and Ebenezer (from 41 – 45 years).

Table 5-8: Median age change 2011 – 2016 and gender (%) in 2016

Statistical Area	Median age 2011 (years)	Median age 2016 (years)	Change 2011-2016 (years)	Male (%)	Female (%)
Calvert	39	45	6	51.6	48.4
Rosewood	38	39	1	46.7	53.3
Ebenezer	41	45	4	48.4	51.6
Willowbank	38	40	2	51.4	48.6
Purga	39	43	4	51.2	48.8
Peak Crossing	36	38	2	51.7	48.3
Ipswich LGA	32	32	0	49.4	50.6
Scenic Rim LGA	42	44	2	49.3	50.7
Queensland State	36	37	1	49.4	50.6

Source: ABS 2016

Table 5-9 shows the percentages recorded for age groups that are potentially vulnerable to changing social conditions, including children, young people and seniors. The Ipswich LGA recorded a high percentage of persons under the age of 16 years (23.7 per cent) compared to the Scenic Rim LGA (18.9 per cent) and Queensland (19.4 per cent), whilst the Scenic Rim LGA recorded a higher proportion of people aged over 65 years (20.2 per cent) compared to Queensland (15.3 per cent) and the Ipswich LGA (10.7 per cent). The higher proportions of older people in the Scenic Rim LGA indicates the potential for vulnerable older people to be affected by Project-related changes e.g. property acquisitions or changes to road connections. It also requires consideration of how information about the Project is communicated (e.g. ongoing face to face engagement rather than reliance on information technology).

There is a significant amount of new housing development occurring in the Ipswich LGA which is likely retaining young people or attracting young families to the area,

Table 5-9: Proportion of Age Groups Vulnerable to Social Change (number and %)

Statistical Area	<16 yrs No	16-24 yrs No	>65 yrs No	<16 yrs % of population	16-24 yrs % of population	>65 yrs % of population
Calvert	43	42	68	13.9	13.5	21.9
Rosewood	188	76	63	25.9	10.5	8.7
Ebenezer	55	39	61	17.4	12.3	19.2
Willowbank	3	0	0	15.0	0.0	0.0
Purga	233	102	120	24.0	10.5	12.3
Peak Crossing	101	69	107	17.6	12.0	18.6
Ipswich LGA	45,918	27,393	20,751	23.7	14.1	10.7
Scenic Rim LGA	7,587	4,214	8,104	18.9	10.5	20.2
Queensland	912,697	613,144	717,951	19.4	13.0	15.3

Source: ABS Census 2016

Disability

Table 5-10 shows the percentage and number of people requiring assistance as a result of living with a disability. The Scenic Rim LGA recorded a high percentage of people requiring assistance (6.2 per cent) due to its older age profile compared to Ipswich (5.7 per cent) and Queensland (5.2 per cent). Within local communities, Calvert recorded the highest percentage of people requiring assistance (5.5 per cent), followed by Purga (4.7 per cent) and Peak Crossing (4.0 per cent).

Table 5-10: Core disability (need for assistance), 2016 (number and %)

Statistical Area	Has need for assistance	
	Number	%
Calvert	17	5.5
Rosewood	14	1.9
Ebenezer	10	3.2
Willowbank	0	0.0
Purga	46	4.7
Peak Crossing	23	4.0
Ipswich LGA	11,040	5.7
Scenic Rim LGA	2,485	6.2
Total	*30,579*	*5.7*
Queensland	*243,267*	*5.2*

Source: ABS Census, 2016

Level of education completed

As shown in **Table 5-11** the Scenic Rim and Ipswich LGA's recorded higher percentages of people who did not go to school or attended to Year 8 or below, compared to Queensland (7.4 per cent, 6.3 per cent and 5.4 per cent respectively). Year 11 or 12 (or equivalent) was the highest level of schooling completed for 49.5 per cent of the population within the Scenic Rim LGA, followed by 56.0 per cent in the Ipswich LGA and 58.9 per cent in Queensland.

A lower proportion of educational attainment within the Scenic Rim LGA may be attributed to the rural nature of the area and distance from schools, the greater proportion of elderly persons (education is more accessible to the current generation) and the higher proportion of employment in farming and trades.

Table 5-11: Highest level of schooling completed, 2016 (number and per cent)

Statistical Area	Did not go to school, or Year 8 or below		Year 9 or 10 or equivalent		Year 11 or 12 or equivalent		Total
	No.	%	No.	%	No.	%	
Scenic Rim LGA	2,312	7.4	10,115	32.4	15,436	49.5	31,211
Ipswich LGA	8,890	6.3	40,967	29.0	79,056	56.0	141,164
Queensland	196,488	5.4	964,903	26.5	2,146,809	58.9	3,643,834

Source: QGSO - ABS, *Census of Population and Housing, 2016, General Community Profile - G16*

Table 5-12 shows that a relatively low proportion of the population in the Ipswich and Scenic Rim LGA's obtained a bachelor's degree or higher, compared to Queensland (12.0 per cent, 12.3 per cent and 18.3 per cent respectively). The percentages of those completing an advanced Diploma or Diploma, and Certificate were similar. Compared to Queensland, lower percentages of people within the Scenic Rim and Ipswich LGAs had university qualifications, but a slightly higher percentage had completed certificates.

Table 5-12: Non-school qualifications by level of education, 2016 (number and %)

Statistical Area	Level of education					
	Bachelor's degree or higher (a)		Advanced diploma or diploma		Certificate (b)	
	Number	%	Number	%	Number	%
Scenic Rim LGA	4,004	12.3	2,782	8.6	7,374	22.7
Ipswich LGA	17,728	12.0	12,790	8.7	36,052	24.4
Queensland	693,410	18.3	330,619	8.7	807,105	21.3

Source: QGSO ABS, Census of Population and Housing 2016, General Community Profile - G40 and G46.

Table notes: Includes persons aged 15 years and over with a qualification within the scope of the Australian Standard Classification of Education.

(b) Includes bachelor's degree, graduate diploma, graduate certificate and postgraduate degree.
(c) Includes Certificate, I, II, III and IV and Certificates not further defined responses.

5.2.6 Income and disadvantage

Incomes

Median household incomes in the Ipswich LGA ($1,410/week) were comparable to the Queensland average ($1,402/week) and higher than in the Scenic Rim LGA ($1,222 /week) in 2016, as shown in **Table 5-13**. The higher percentage of seniors within the Scenic Rim LGA likely contributed to the lower median incomes recorded in this area.

Peak Crossing, Ebenezer, Purga and Calvert recorded higher median household incomes than Queensland, whilst Willowbank and Rosewood recorded lower median incomes than the State average. (ABS Census 2016)

The Ipswich LGA had a slightly larger average household (2.8 people) compared to the Scenic Rim LGA and Queensland (2.6 for both), due to the higher proportion of families within the Ipswich LGA.

Table 5-13: Median household income ($ per week) and household size 2016

Statistical Area	Median weekly household Income ($)	People per household No.
Calvert	1,437	2.7
Rosewood	1,110	2.5
Ebenezer	1,525	2.7
Willowbank	1,198	2.4
Purga	1,512	2.9
Peak Crossing	1,638	3.1
Ipswich LGA	1,410	2.8

Statistical Area	Median weekly household Income ($)	People per household No.
Scenic Rim LGA	1,222	2.6
Queensland	1,402	2.6

Source: ABS Census 2016

Socio-economic advantage and disadvantage

The SEIFA summarises information about economic and social conditions derived from Census variables. Scores are compared to the standardised baseline (State) score of 1,000 with a low score indicating relatively greater disadvantage. The two indices reported below provide an indication of social resources in the Project region.

The IRSAD index summarises factors including income, percentage in low skilled occupations, unemployment, housing expenditure and occupied dwellings with no cars or requiring extra bedrooms. The Index of Education and Occupation (IEO) reflects levels of qualification achieved, participation in further education and the skills levels for occupation.

IRSAD and IEO scores for 2011 and 2016 for the Project region are shown in **Table 5-14**. The Ipswich LGA is neither particularly advantaged nor disadvantaged, being positioned midrange in the 5th decile and ranked 49th of 80 Queensland LGAs. The result is similar for the IEO index, with Ipswich LGA in the 6th decile and ranked 42nd of 80 LGAs. The IRSAD result for Rosewood SA2 suggests there may be some pockets of relative disadvantage there, being in decile 3 and among the 30 per cent most disadvantaged SA2s in Queensland. Boonah SA2 also appears less advantaged than is typical for Ipswich, being in decile 4 and among the 40 per cent most disadvantaged SA2s in Queensland. However, both SA2s have mid-level education and skills relative to other areas, with Rosewood in the 6th decile and Boonah in the 7th.

The Scenic Rim LGA enjoys relative advantage in decile 6 and ranked 57th of the 80 Queensland LGAs. The Scenic Rim LGA has more education and skills relative to other areas, being in decile 8 and ranked 62nd of 80 LGAs.

Table 5-14: Relative socio-economic advantage and disadvantage, score and ranking (decile)

Statistical Area	Index of Relative Socio-economic Disadvantage			Index of Education and Occupation		
	Score	Decile	Rank in Qld	Score	Decile	Rank in Qld
			Position in 526 SA2s			*Position in 526 SA2s*
Boonah SA2	963	4	196	1,025	7	339
Rosewood SA2	952	3	173	1,014	6	305
			Position in 80 LGAs			*Position in 80 LGAs*
Ipswich LGA	948	5	49	932	6	43
Scenic Rim LGA	968	6	57	962	8	62

Source: ABS Census 2016

Internet access

Information and services which support wellbeing are increasingly being accessed through the internet. As shown in **Table 5-15**, in 2016 within the Ipswich LGA, 83.8 per cent of households noted at least one person accessing the internet comparable to 83.7 per cent in Queensland, whereas less people accessed the internet in the Scenic Rim LGA (80.6 per cent).

Within the SA2 of Boonah, 20.2 per cent of dwellings did not have access to the internet, while in Rosewood SA2 17.8 per cent of dwellings did not have access. This is greater than the Queensland percentage of 13.6 per cent and likely attributed to an older median age in these localities.

Consultation with the five Chambers of Commerce operating in the Scenic Rim LGA indicated that internet access is a major change to business growth, and to retention and attraction of young people, with 70% of the geographic region serviced by satellite rather than the National Broadband Network.

Table 5-15: Dwelling internet connection 2016 (%)

Statistical Area	Internet not accessed from dwelling (% of population)	Internet accessed from dwelling (% of population)	Not Stated (% of population)
Boonah SA2	20.2	77.5	2.3
Rosewood SA2	17.8	79.7	2.5
Ipswich LGA	13.8	83.8	2.5
Scenic Rim LGA	16.9	80.6	2.5
Queensland	13.6	83.7	2.7

Source: ABS Census 2016

5.2.7 Travel behaviour

Transport networks

The Cunningham Highway connects to the Ipswich Motorway to the north, and provides a link from Brisbane to the south-east, passing through the urban areas of Ipswich, Warwick and ending in Goondiwindi.

The Warrego Highway also connects to the Ipswich Motorway to the east, connecting Brisbane to Toowoomba, Dalby, Chinchilla, Miles, Roma and ending in Charleville.

EIS Appendix U: Traffic Impact Assessment Technical Report Figure 1-2 provides a map of the Project's interfaces with the local road network and highways in the Project region.

The Rosewood/Ipswich train line provides passenger rail services 7 days a week from Rosewood to Brisbane, passing through Ipswich.

Major cycling and walking trails in the Ipswich and Scenic Rim LGAs include:

- Hidden Peaks Trail (110 km) - cycling
- Purga Nature Reserve – walking
- Hardings Paddock – walking
- Flinders Peak Conservation Park – walking.

There appear to be no identified stock routes which would be affected by the disturbance footprint.

The Ipswich Community Plan identifies several projects in proximity to the SIA study area as part of an integrated, transport and movement vision, including the Cunningham Highway to Warrego Highway connection, Western Ipswich Bypass (Haigslea to Amberley) and the Cunningham Highway four lane upgrade – Ripley Road to Ebenezer. Amberley was also identified as a key hub for economic activity, as well as Ebenezer and Willowbank, offering the opportunity for new enterprise (ICC 2018).

Vehicle ownership

The Scenic Rim LGA recorded higher numbers of vehicles per dwelling (2.1) compared to the Ipswich LGA and Queensland (1.9 and 1.8 respectively) in 2016 (refer **Table 5-16**). The rural nature of the Scenic Rim LGA, distance between essential services and less regularity of public transport are likely contributors to the higher percentage of vehicle ownership. Rosewood had the lowest rate of car ownership of all local communities (at 1.8 vehicles per dwelling).

Only 2.8 per cent of dwellings in the Scenic Rim LGA did not have a motor vehicle, compared to 5.4 per cent in the Ipswich LGA.

Table 5-16: Motor Vehicle Ownership (vehicles per dwelling)

Statistical Area	Motor Vehicles per dwelling (no.)
Calvert	2.6
Rosewood	1.8
Ebenezer	2.5
Willowbank	2.0
Purga	2.8
Peak Crossing	2.7
Ipswich LGA	1.9
Scenic Rim LGA	2.1
Queensland	1.8

Source: ABS Census 2016

Public transport

Ipswich is well serviced by passenger rail via the Rosewood to Brisbane train service and has a local public bus service. From Ipswich travelling west the train stations are Thomas Street, Wulkuraka, Karrabin, Walloon, Thagoona and Rosewood, where the train terminates.

The Scenic Rim LGA has limited public transport services. There are several bus companies that provide limited scheduled services and/or offer charter services in the region, including Road Runner Bus Line, Amberley Rosewood Bus Company, Southern Cross Transit, Fassifern Coaches and All-About Charter Services.

School bus routes

Existing school bus routes that are likely to be impacted by construction traffic and/or proposed and existing road rail crossings were identified through a review of data sourced from the Queensland Government. Identified routes that may be impacted are discussed in Section 7.4.1.

5.2.8 Summary of key demographic features

From the community profile analysed above, the key features of the social baseline which are relevant to identification and assessment of social impacts are:

- There are several SA1s in the SIA study area where potential socio-economic disadvantage could affect residents' capacity for participation in Project consultation, or exacerbate disadvantage if there are impacts on secure housing tenure, quality of life or property use
- Rosewood is the largest population centre at more than 2,800 people in 2016, with most local centres having small population bases

- Population growth is occurring unevenly through the Project region, with significant growth of 30.2 per cent expected in the Ipswich LGA between 2021 and 2026, compared to 11.8 per cent in the Scenic Rim
- Rosewood SA2 is expected to double its population between 2017 and 2026 due to planned development under the SEQ Regional Plan
- Peak Crossing increased its population by more than 26.4 per cent from a small base of 769 people, between 2011 and 2016
- Indigenous people are more highly represented in a number of settlements with the greatest representation in Calvert (7.1 per cent), followed by Rosewood (5.4 per cent) and Ebenezer (4.4 per cent), when compared with Queensland's 4.0 per cent
- The highest percentage of couple with children families was in Peak Crossing (50.9 per cent), while sole parent families are highly represented in Rosewood (26 per cent)
- Scenic Rim LGA has an older median population (44 years) compared to Queensland (37 years) and the Ipswich (LGA 32 years), and is ageing at a faster rate than both
- Calvert was the only community where the percentage of people requiring assistance as a result of living with a disability (5.5 per cent) was higher than the State average. This is consistent with the higher percentage of people over 65 years here (21.9 per cent compared to the State average of 15.3 per cent)
- Peak Crossing, Ebenezer, Purga and Calvert recorded higher median household incomes than Queensland, whilst Willowbank and Rosewood recorded lower median incomes than the State average
- Ipswich households have similar levels of access to the internet to Queensland (accessed in 83.8 per cent of the dwellings), while levels of access by Scenic Rim LGA households is lower at 80.6 per cent
- Ipswich residents have good access to passenger rail services, whilst Scenic Rim LGA residents have limited access to public transport
- Outside Ipswich and Rosewood communities, including village residents and rural landholders, are heavily reliant on private transport.

The extended drought has affected the financial resources of families and businesses throughout the Project region, and the 2021 Census may reveal decreases in incomes and socio-economic indicators.

5.3 Community and cultural values

5.3.1 Community survey inputs

The SIA community survey identified local community values by asking respondents to respond to a series of value statements about their community. Scores were based on a scale of 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree) and are presented in Figure 5-3. A total of 175 Project region residents responded to this question from a total of 342 respondents. The weighted average of total survey responses for this question is provided for comparison.

Respondents from the Project region strongly agreed that their communities stick together when times are tough (with ratings of at least 4). They were also in strong agreement that their communities are family-oriented, safe and have a strong sense of identity.

The lowest scores were for the statement that local communities have the ability to adapt to change (2.8 for Scenic Rim LGA, 3 for Ipswich LGA and 2.9 for the communities on the boundary between the LGAs). While these ratings are towards the positive end of the spectrum, when compared to responses on other values they indicate respondents' concern about their communities' resilience to social impacts.

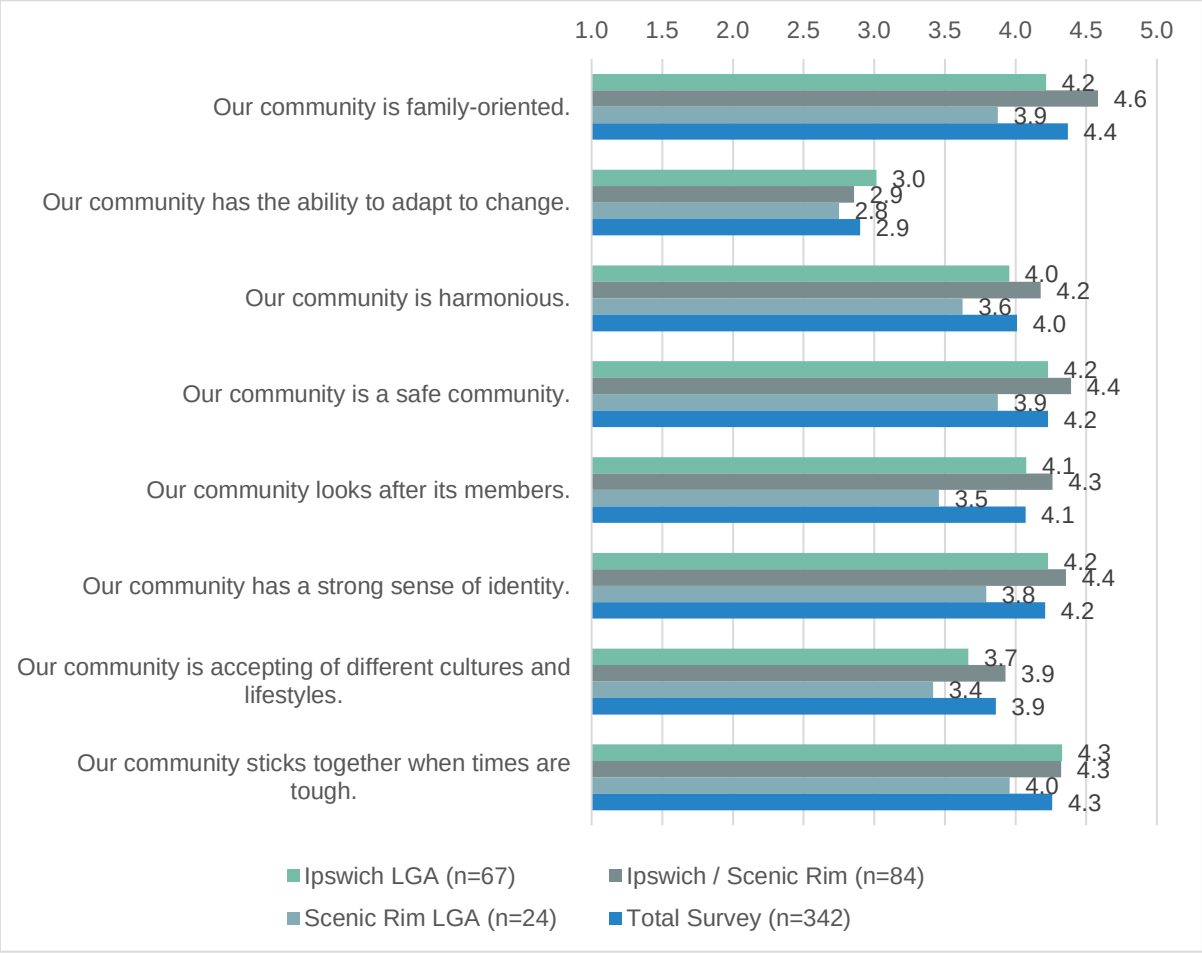


Figure 5-3: Community values in Project region

Comments by respondents demonstrated shared values held for family and community safety, the peace and quiet, local wildlife, picturesque landscapes and rich cultural heritage of the area, reflected in the following sample of comments:

- "We live in Scenic Rim Shire which prides itself on being clean and green. We live in a rural environment where young have the area to enjoy outdoor activities i.e. motor bike riding, horse riding, bush walking, mountain climbing. We enjoy quietness and openness under the stars".
- "Peak Crossing still has a rural feel even though it is close to major towns. Its main attraction is the peace and quiet. Many families move here to give a healthier lifestyle to their kids. It is an attractive retirement destination away from the noise and bustle of major towns"
- "We value proximity to health care facilities and shopping centres at Purga, Yamanto, Ipswich and Springfield, proximity to rural shopping (machinery etc) at Boonah and Kalbar."

5.3.2 Cultural heritage

An Indigenous cultural heritage investigation was undertaken as part of the EIS (refer EIS Chapter 18: Cultural Heritage). The investigation included an initial desktop assessment and preliminary consultation, which identified a total of 45 Indigenous cultural heritage sites within a 1 km buffer of the disturbance footprint. Site types included artefact scatters, landscape features, resource areas, grinding grooves, scarred/culturally modified trees, waterholes and a rock shelter.

Indigenous cultural heritage studies undertaken as part of the (CHMPs) developed between ARTC and the relevant Aboriginal Parties (refer Section 7.1.1) identified the potential for cultural heritage impacts and developed management measures to address these impacts.

The historic cultural heritage assessment identified no National Heritage Places or Commonwealth Heritage Places located within 1 km of the proposed alignment. A targeted investigation of the EIS investigation corridor identified ten areas of interest are of local heritage significance. Refer Appendix T: Non-Indigenous Heritage Technical Report.

5.3.3 Cultural diversity

Cultural diversity in the SIA study area is represented at a broad level by the percentages of people born in Australia, percentages of people who were not proficient in the English language as shown in **Table 5-17**, and the most common languages spoken other than English.

Table 5-17: Cultural diversity indicators, 2016 (%)

Statistical Area	Born in Australia (% of population)	Not proficient in English language (% of population)
Calvert	85.3	0.0
Ebenezer	79.6	0.0
Peak Crossing	81.8	0.0
Purga	83.0	0.0
Rosewood	83.6	0.3
Willowbank	84.2	0.0
Ipswich LGA	72.9	2.9
Scenic Rim LGA	76.9	0.4
Queensland	71.1	1.8

Source: ABS Census of Population and Hosing 2016.

Ipswich LGA has a slightly higher percentage of people born in Australia (72.9 per cent) than the State average (71.1 per cent), while in the Scenic Rim LGA the percentage was higher (76.9 per cent). Local communities also had a strong representation of Australian-born residents, with percentages ranging from 79.6 per cent to 85.3 per cent. It follows that most people are proficient in English, with only a low representation of people who are not.

The five most common non-English speaking countries of birth for Ipswich LGA residents were India (1.0 per cent), Philippines (0.9 per cent), Vietnam (0.6 per cent), Fiji (0.4 per cent) and the Netherlands (0.3 per cent). In the Scenic Rim LGA the five most common non-English speaking countries of birth were Germany (0.6 per cent), Netherlands (0.5 per cent), Philippines, (0.3 per cent) South Korea (0.2 per cent) and Papua New Guinea (0.2 per cent) (QGSO 2018).

5.3.4 Amenity and lifestyle

Amenity refers to the use and enjoyment of private and public properties. Residential amenity in areas near the disturbance footprint is characterised by:

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

Consultation indicated that community members near the disturbance footprint enjoy a rural lifestyle based on:

- A quiet environment
- Dependence on agriculture and local businesses
- Active, self-generated outdoor recreation (such as bike riding, horse riding and trail walking)
- Dependence on small towns such as Rosewood in the north and Peak Crossing in the south for daily needs and social activities
- Involvement in the growing nature and food-based tourism industry.

Other features of the social environment that support local quality of life include a clean and healthy environment, affordable housing, privacy, close community connections, access to local services and community events, and strong community networks.

5.3.5 Community identity

Community identity is derived from elements including community history, land uses, special features and community characteristics, and varies greatly between the Ipswich and Scenic Rim LGAs.

Ipswich LGA resident's identity is informed by Ipswich City's history as an administrative hub, and by economic strengths in manufacturing, the public service, railway servicing and mining. During the past few decades Ipswich has evolved as a self-contained city with a strong orientation towards economic growth and diversity, and a planning mandate for growth including extensive residential development in the Ripley Valley. Urban form is predominantly low rise throughout the LGA, and green space and community facilities contribute to the identity of a well-serviced community with an active lifestyle.

The Scenic Rim LGA's identity is as a clean, green rural area, close to Brisbane and other major centres, and with a growing role in tourism and residential options offering a rural lifestyle. The vision outlined in the Scenic Rim Community Plan defines community aspirations for the Peaks Crossing, Washpool, Undullah and Kagaru as including spectacular scenery and healthy environment, relaxed living and a rural lifestyle, vibrant towns and villages, and healthy, engaged and resourceful communities.

Local communities near the SIA study area have a small-town, rural identity influenced by strong connections to agricultural heritage, and a high degree of community cohesion. Rosewood and Peak Crossing have distinct village identities, with Peak Crossing more strongly influenced by its expansive rural setting, whilst Rosewood is located between Ipswich's urban and rural areas.

A wide variety of residents in the Project region are involved in environmental management, farming and/or tourism initiatives that are strongly connected to the land, which in turn strongly influences community identity.

5.3.6 Community cohesion

Strong communities exhibit resilience and have well-developed social connections, contributing to community health and wellbeing.

The level of volunteering by residents is a measure of community cohesion. Levels of volunteering vary across the potentially affected communities, with lower levels in the suburbs of Calvert, Rosewood and Purga than in Queensland generally (16.1 per cent, 17.4 per cent and 17.7 per cent respectively compared with Queensland's (18.8 per cent), while Willowbank, Peak Crossing and Ebenezer have similar or higher levels of volunteering (18 per cent, 23.4 per cent and 21.3 per cent respectively) (ABS 2016).

The results of the SIA community survey (refer Section 6.3.1) indicate that residents in the Project region generally agreed that their communities as family-oriented and safe, which supports community cohesion, however, lower ratings were consistently provided in relation to their community's capacity to adapt to change.

The ability to access support in times of crisis is a further indicator of the strength of social connections in a community. It is estimated that around 94 per cent of people in the SIA study area SA2s would be able to find support outside the home in times of crisis (slightly higher than the Queensland estimate of 93 per cent). Modelled estimates indicate that most would also be able to raise $2,000 within a week, a similar or higher rate to Queensland (with estimates of 86.4 per cent in Greenbank, 82.8 per cent in Jimboomba and 79.7 per cent in Boonah/Rosewood, compared with 81.9 per cent in Queensland) (Torrens University PHIDU 2018).

5.3.7 Sense of place

Sense of place refers to an appreciation of, and attachment to aspects of a place and its identity. and describes 'the human experience of place …the beliefs, perceptions, and attitudes held toward a place… conscious and unconscious attachments to place [which] can also be a strong component of personal, as well as group or community identity" (De Wit 2012).

Sense of place in the SIA study area has a strong relationship to the land (through farming, and attachment to the landscape) environmental values and the pattern of rural localities and villages, as well as social elements such as relationships between community members and places. Factors of value to sense of place in or near the SIA study area include:

- Visual connections to the mountain range and peaks
- 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
- Local shops and services, which represent self-reliance
- Tourism, which is adding to the sense of vitality, and supporting local businesses.

Indigenous people have a particular relationship to land and their sense of community is strongly connected to natural elements of place. As noted in Section 5.3.2, Yuggera Ugarapul Elders are strongly attached to the SIA study area's cultural landscapes and noted that the entire Mount Flinders area is a sacred site, in particular for the frog people 'Goupong Ugarapul'. Elders identified that there are also sacred sites around Ebenezer, and sensitivities regarding the former Purga mission site.

Consultation also indicates that people who have lived in the area for a long time also have a strong sense of place, evidenced by strong connections to the rural landscape, small towns and environmental attributes.

5.3.8 Access to natural resources

Residents within and near the SIA study area have access to rural views (open grassland, forested areas, farms and homesteads), enhanced by the generally gentle topography. In the Scenic Rim LGA (as the name suggests) residents and visitors have views to dramatic mountainous ranges as the backdrop to rural landscapes, which support both local character and the area's attraction as a tourism destination.

Many of the properties within the SIA study area are dependent on bore water, creeks and dam water to irrigate their farms or stock. Many homes in the area are also dependent on tank water for residential supplies, and consequently, access to water is a critical resource which needs to be managed.

Agricultural land is also integral to community wellbeing and the local economy. This is further discussed in Section 7.5.3.

5.4 Employment, business and industry

5.4.1 Employment and labour

This section proves an overview of labour force characteristics in the Project region. Of note, Census data sets differ slightly for different tables providing small variations in total workforce numbers.

In March 2019, the total labour force of the Project region was estimated at 125,509 people, which included 21,058 people in the Scenic Rim LGA and 108,461 people in the Ipswich LGA. Labour force participation rates were substantially lower than the Queensland average in both LGAs (refer **Table 5-18**).

The unemployment rate was higher in the Ipswich LGA at 6.8 per cent than in the Scenic Rim LGA (5.3 percent) and Queensland (6.0 per cent). However, over the 12 months to March 2019, labour market conditions had improved marginally with a decrease of -1.8 percentage points in the Ipswich LGA and a decrease of 0.3 percentage points in the Scenic Rim LGA.

Table 5-18: Labour force, participation rate and unemployment (number and percentages) 2016

Statistical Area	Labour force	Participation rate*	Unemployed persons	Unemployment rate	12 month unemployment rate change
Ipswich	108,461	71.20%	7,350	6.80%	-1.8
Scenic Rim	21,048	68.60%	1,154	5.50%	-0.3
Queensland	2,685,932	78.20%	163,145	6.10%	-0.1

Source: Australian Government's Small Area Labour Markets publication, March 2019; ABS, Labour Force Survey, Australia, March 2019 (12-month moving average); ABS 2016 Census of Population and Housing. * for working age population 15 to 64 years, June 2016.

Employment by industry

Table 5-19 provides the number and percentage of the Project's region's workforce employed by each industry in 2016. In the Ipswich LGA, the largest proportions of workers are employed in service based industries such as Health Care and Social Assistance (13.2 per cent) and Retail Trade (10.5 per cent). A significant proportion of the population are also employed in manufacturing (10.0 per cent) or construction (8.4 percent).

In the Scenic Rim LGA, employment by industry is diverse across primary, secondary and service based industries. This reflects the land uses of the LGA, primarily regional landscape and rural production. The strongest industries of employment are Construction (10.8 per cent), followed by Health Care and Social Assistance (10.5 per cent), Education and Training (9.4 per cent) and Agriculture, Forestry and Fishing (8.8 per cent).

The Project region includes large numbers of people employed in directly relevant industry sectors to support the construction of the Project. According to the 2016 Census, 1,822 workers or 10.8 per cent of the Scenic Rim LGA's workforce were employed in the construction industry, whilst Ipswich's much larger labour force included 7,049 workers or 8.4 per cent of the LGA's workforce in the construction industry.

Table 5-19: Employment by industry (number and percentages) 2016

Industry	Scenic Rim (no).	Scenic Rim (%)	Ipswich (no).	Ipswich (%)	Qld
Mining	174	1.0%	749	0.9%	2.3%
Information Media and Telecommunications	155	0.9%	882	1.0%	1.2%
Electricity, Gas, Water and Waste Services	211	1.2%	1,060	1.3%	1.1%
Arts and Recreation Services	325	1.9%	824	1.0%	1.6%
Agriculture, Forestry and Fishing	1,483	8.8%	702	0.8%	2.8%
Rental, Hiring and Real Estate Services	278	1.6%	1,381	1.6%	2.0%
Financial and Insurance Services	244	1.4%	2,102	2.5%	2.5%
Administrative and Support Services	556	3.3%	2,860	3.4%	3.5%
Wholesale Trade	451	2.7%	2,712	3.2%	2.6%
Other Services	685	4.0%	3,317	3.9%	3.9%
Professional, Scientific and Technical Services	776	4.6%	3,695	4.4%	6.3%
Accommodation and Food Services	1,163	6.9%	4,656	5.5%	7.3%
Public Administration and Safety	1,031	6.1%	7,651	9.1%	6.6%
Transport, Postal and Warehousing	785	4.6%	5,464	6.5%	5.1%
Education and Training	1,586	9.4%	6,846	8.1%	9.0%
Manufacturing	1,147	6.8%	8,425	10.0%	6.0%
Retail Trade	1,454	8.6%	8,843	10.5%	9.9%
Construction	1,822	10.8%	7,049	8.4%	9.0%
Health Care and Social Assistance	1,777	10.5%	11,093	13.2%	13.0%
Inadequately described	647	3.8%	2,873	3.4%	3.1%
Not stated	189	1.1%	1,095	1.3%	1.1%
Total	16,939	100.0%	84,279	100.0%	100.0%

Source: Census of Population and Housing, 2016, TableBuilder. Based on Place of usual residence

As presented in the EIS Appendix S: Economic Technical Report, residents in the adjacent Logan LGA included 15,784 construction industry workers, and across the broader Greater Brisbane region, 92,556 workers were employed in the construction industry. Along with the Ipswich and Scenic Rim LGAs, these regions represent a considerable pool of potential labour for the Project.

Occupation

Table 5-20 shows the number and percentage of people by occupation in the Project region. Of relevance to the Project's construction phase, within the Ipswich LGA, the largest proportion of workers are employed as Technicians and Trade Workers (15.1 per cent), with representation of Machinery Operators and Drivers (9.9 per cent) and labourers (12.6 per cent also above the Queensland averages.

In the Scenic Rim LGA, Technicians and Trade Workers are also well represented (at 16.1 per cent compared the Queensland average of 14.3 per cent), whilst the proportion of Machinery Operators and Drivers (7.7 per cent) and labourers (14.1 per cent) were also above the Queensland averages.

Table 5-20: Employment by occupation (number and percentages) 2016

Occupation	Ipswich (no.)	Scenic Rim (no)	Ipswich (%)	Scenic Rim (%)	Queensland (%)
Managers	7,601	2,563	9.0%	15.1%	12.1%
Professionals	12,253	2,423	14.5%	14.3%	19.8%
Technicians and Trades Workers	12,704	2,729	15.1%	16.1%	14.3%
Community and Personal Service Workers	10,749	1,877	12.8%	11.1%	11.3%
Clerical and Administrative Workers	12,288	2,058	14.6%	12.2%	13.6%
Sales Workers	8,118	1,358	9.6%	8.0%	9.7%
Machinery Operators and Drivers	8,382	1,301	9.9%	7.7%	6.9%
Labourers	10,656	2,381	12.6%	14.1%	10.5%
Inadequately described	926	131	1.1%	0.8%	0.9%
Not stated	601	107	0.7%	0.6%	0.7%
Total	84,278	16,928	100,0%	100.0%	100.0%

Source: Census of Population and Housing, 2016, TableBuilder. Based on Place of usual residence

Unemployment in local communities

Unemployment data as reported at the 2011 and 2016 Census are provided at State suburbs, LGA and SA4 levels to reflect changes in unemployment in local communities and the Statistical Area 4 (SA4) labour force regions within which Ipswich and Scenic Rim LGAs are located. SA4 areas are specifically designed to capture labour force survey data and consider a larger geographic footprint.

Census 2016 data show that the percentage of unemployed people increased in the SA4 areas of both Ipswich and Logan-Beaudesert between 2011 and 2016. As shown in **Table 5-21**, the Ipswich SA4 experienced a 1.83 percentage points increase in unemployment between 2011 to 2016, whilst the Logan-Beaudesert SA4 experienced a 1.68 percentage points increase in unemployment. These increases were higher than that experienced by the State as a whole (rising by 1.5 percentage points from 6.1 per cent in 2011 to 7.6 per cent in 2016).

At the LGA level, the Ipswich LGA's unemployment rate increased from 7.1 per cent at the 2011 Census to 8.9 per cent at the 2016 Census. The Scenic Rim LGA's unemployment rate also increased over this period, from 5.6 per cent to 6.0 per cent. The Rosewood, Ebenezer and Purga State suburbs all experienced an increase in unemployment during 2011-2016. However, Purga's unemployment rate remained reasonably low at 4.64 per cent, whereas Rosewood and Ebenezer recorded high rates of unemployment (11.27 per cent and 10.0 per cent respectively).

High rates of unemployment in this area are likely to be attributable to a combination of a lack of access to transport, the lack of major employers in these towns, and lower educational attainment levels.

Table 5-21: Unemployment, 2011 to 2016 (% of labour force)

Statistical Area	2011 (% of labour force)	2016 (% of labour force)
Calvert	7.56	5.80
Ebenezer	6.79	10.00
Peak Crossing	5.16	2.70
Purga	2.54	4.64
Rosewood	6.67	11.27
Willowbank	7.50	7.00
Ipswich LGA	7.1	8.9
Scenic Rim LGA	5.6	6.0
Ipswich SA4	7.12	8.95
Logan-Beaudesert SA4	7.1	8.8
Queensland	6.1	7.6

Source: ABS Census 2011 and 2016

Unemployment data provided by the Department of Education Skills and Employment (DESE) indicates that during the past five years, the unemployment rate in the Ipswich LGA increased from 7.5 per cent in March 2016 to 8.5 per cent in March 2018, decreasing during 2018 but increasing again during 2019 to reach 8.0 per cent in March 2020 (the most recent data available) (refer Figure 5-4). The unemployment rate in the Scenic Rim was more stable, commencing at 6.1 per cent in March 2016, with minor fluctuations over the ensuing three years and reaching 6.0 per cent in March 2020.

At March 2019, the Project region's workforce included 8,504 people who were unemployed (1,154 people in the Scenic Rim LGA and 7,350 people in the Ipswich LGA). By March 2020, this had increased to 10,430 people, including 1,281 Scenic Rim LGA residents and 9,149 Ipswich LGA residents (DESE, 2020).

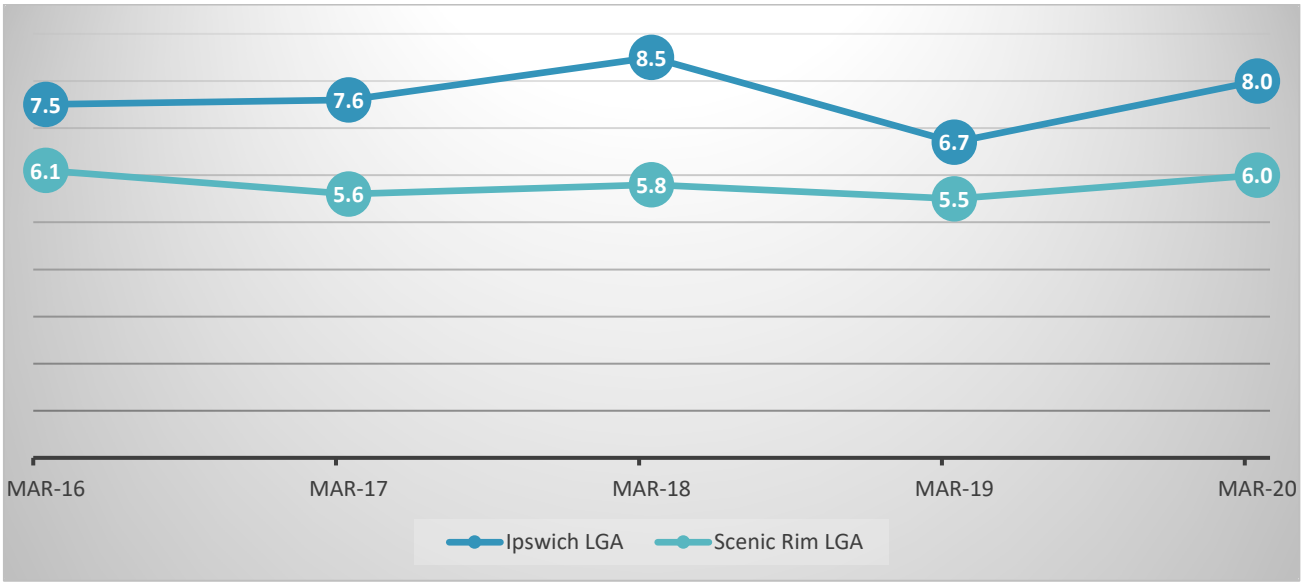


Figure 5-4: Unemployment rate in Ipswich and Scenic Rim LGAs (percentage) March 2016 to March 2020

Source: DESE LGA Data tables — Small Area Labour Markets — March quarter 2020

As shown in **Table 5-22**, in 2016 youth unemployment in the Ipswich LGA was 19.3 per cent, higher than both Queensland and the Scenic Rim LGA's (15.8 per cent and 12.2 per cent respectively). The SA4s of Ipswich and Logan-Beaudesert also recorded higher percentages of youth unemployment compared to Queensland (19.3 per cent and 19.1 per cent respectively compared with 15.8 per cent).

In 2016 Indigenous unemployment was recorded at 20.1 per cent in Queensland, 19.9 per cent in the Ipswich LGA and significantly lower at 16.5 per cent in the Scenic Rim LGA.

The Scenic Rim LGA recorded the same percentage of unemployment for both males and females at 6 per cent. A higher percentage of females were unemployed in the Ipswich LGA, compared to males (9.2 per cent and 8.8 per cent respectively).

Table 5-22: Unemployment by population cohort, 2016 – Number and percentage

Statistical Area	Indigenous	Youth (15-24 years)	Male	Female
Ipswich LGA	309	3,375	4,282	4,032
	19.9%	*19.3%*	*8.8%*	*9.2%*
Scenic Rim LGA	39	309	564	513
	16.5%	*12.2%*	*6.0%*	*6.0%*
Ipswich SA4	857	5,195	6,939	6,430
	20.2%	*19.3%*	*8.8%*	*9.1%*
Logan-Beaudesert SA4	646	5,240	6,808	6,468
	17.3%	*19.1%*	*8.5%*	*9.2%*
Queensland	*20.1%*	*15.8%*	*6.9%*	*6.0%*

Source: ABS Census 2016

5.4.2 Labour and skills availability

The Project's major requirement for labour and skills will be during the construction phase. The AIGroup Construction Outlook November 2018 Survey (2018a) found that the construction industry was experiencing widespread and increasing difficulties in sourcing skilled labour and material, with 69.2 per cent of respondents reporting either 'major' or 'moderate' difficulty in recruiting skilled labour in the six months to March 2018, up from 66.7 per cent in the previous six months. Respondents were not expecting this situation to ease, with continued growth in the construction sector forecast into 2019/20, based on a range of large-scale projects, and strong growth prospects in transport infrastructure and civil works projects, which were expected to continue to draw heavily on labour and materials. 'Major' or 'moderate' difficulties sourcing sub-contractors was reported by 57.8 per cent of respondents, down from 66.7 per cent in the previous six months.

As noted in the previous section, there were almost 2,600 registered construction industry businesses in the Project region in 2016-17. These are likely to include businesses with appropriately skilled personnel, services and equipment for the Project's construction phase. In 2016 the Project region's labour force included 8,871 people working in the construction industry (1,822 workers in the Scenic Rim LGA and 7,049 workers in the Ipswich LGA) (ABS, 2016a).

As noted in Section 5.4.1, the Project region's workforce included 10,430 people who were employed in March 2020, including 9,149 Ipswich LGA residents and 1,281 Scenic Rim LGA residents (DESE, 2020).

The number of Ipswich LGA residents receiving Jobseeker or Youth Allowance increased from 11,400 to 18,395 people (an increase of 61.3 per cent) between March 2020 and July 2020, whilst the number of Scenic Rim residents receiving these benefits increased from 1,739 people to 2,955 people (an increase of 70 per cent) over the same period (id.profile, 2020). This was largely due to decreased economic activity resulting from COVID-19 and indicates that in 2020, the availability of labour in both skilled and unskilled professions is likely to be significantly higher than in previous years.

Table 5-23: Jobseeker recipients, Project region, change March – July 2020

LGA	July 2020		March 2020		Change	
	JobSeeker and youth allowance recipients	% of 15-64 age population	JobSeeker and Youth allowance recipients	% of 15-64 age population	No.	%
City of Ipswich	18,395	13.2	11,400	8.2	+6,995	61.3
Scenic Rim Regional Council	2,955	11.5	1,739	6.8	+1,216	70.0
Project region	21,350	-	13,139	-	+8,211	62.5

Source: id.Profile (2020)

This indicates the likely availability of construction workers from within the Project region for the Project's construction.

Regional level labour projections over the 2018-2023 period indicate (Department of Jobs and Small Business, 2019):

- The West Moreton region is projected to have an average annual average surplus in construction workers, with a shortage predicted for 2023-2028
- The Darling Downs region (which includes Toowoomba LGA) is projected to have an average annual average surplus of construction workers relative to the supply from residents between 2018 and 2028.

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

ARTC has commenced a partnership with Construction Skills Queensland (CSQ) to identify skill shortages and develop training pathways, with other training partners, as part of the Inland Rail Skills Academy (refer Section 8.2.9). However, it is possible that in the cumulative context, the Project will compete for labour with other infrastructure projects, including other Inland Rail projects (refer Section 7.6.2).

5.4.3 Tourism

Tourism is an important industry in the Scenic Rim LGA, which is promoted as 'a destination for tourism, art, food, outdoor adventure, walking, water sports and rural enterprise' (Visit Scenic Rim 2018). Ipswich has also developed strengths in tourism, based on its heritage and history, nature-based recreation, challenge-based adventure, and spectator and participation events (ICC 2015).

Scenic Rim and Ipswich visitors have easy access to National Parks linked to the Flinders-Karawatha Corridor, which are integral to scenic amenity and significant generators of day trip tourism. Walking tracks, flora and fauna, extensive wooded and mountainous vistas and the area's natural beauty attract day trippers and overnight stayers, with a diverse range of bed and breakfasts, farm stays and mountain lodges also on offer.

Year-round tourism visitation is encouraged in the Scenic Rim where national parks, towns and villages, adventure parks, farm stays wineries, community events and camping grounds support a wide range of experiences, with SRRC estimating that 80% of tourists are day-trippers. The Scenic Rim Tourism Strategy 2017-2021 (SRRC, 2017) notes that visitation to the Scenic Rim generally peaks in July, with key off-peak months being December and March, reflecting seasonal weather patterns and key events such as Eat Local Week (held in July).

Ipswich LGA has extensive tourism offerings based in events, sporting carnivals, motor sports events, music festivals, trails (restaurants and producers), nature and adventure trails and heritage (ICC, 2018) which support tourism visitation throughout the year. The City of Ipswich Destination Management Plan (ICC 2019) includes an objective to develop a seasonal campaign plan for Ipswich's tourism industry (ICC, 2019). On this basis, tourism will be an important year-round industry in the Project region into the future.

The Ipswich Motorsport Precinct (also known as Albert Theaker Park) is located approximately 230 m north of the Project at Ch 14.2 to Ch 16.0 km, adjacent to the Cunningham Highway. It consists of the Queensland Raceway, Ipswich Kart Club, Ipswich City Dirt Kart Club, Ipswich West Moreton Auto Club, Rally School and Willowbank Raceway drag strip (ICC, 2019). The site is also in proximity to RAAF Base Amberley and shares a noise buffer zone with the base, allowing the operation of loud events (Queensland Raceways 2018).

The Ipswich Motorsport Precinct is activated year-round, with each of the lessees within the Precinct conducting a range of events, and with event calendars changing on an annual basis. Major events include CMC Rocks (a music festival scheduled for March in 2020), the Ipswich Sprint as part of the Supercars Championship (not scheduled for 2020) and the Touring Car Championships events (before COVID-19 restrictions, scheduled during March, May, June, July, September and October in 2020). Both week to week events and major events make a strong contribution to tourism in the LGA including day-trips and overnight stays, with flow-on benefits to other tourism businesses.

IRCEC is a major outdoor convention and events centre, encompassing more than 600 ha on both sides of Mt Flinders Road, Peak Crossing (IRCEC 2018), and is located approximately 1 km from the disturbance footprint. IRCEC hosts regular events including peace conventions, music events, and recreation events. Examples include the Earth Frequency Festival held annually in February and the Banana Bash car racing event held annually in October. Facilities include a function centre and restaurant, a 4,500-seat outdoor amphitheatre, pavilion, bushwalking tracks, natural parkland, campgrounds and a small range of accommodation units. IRCEC also includes an organic farm. The Centre employs a small permanent staff, engages a wide range of local contractor services and as a charitable organisation, has a strong cohort of volunteers. The centre's economic value is shared with the local accommodation and hospitality sectors during large events.

There are also vineyards and wineries are in the nearby area which also function as small event venues. They include:

- Flinders Peak Winery (and accommodation units) at 1544-1580 Ipswich-Boonah Road, Peak Crossing
- Ironbark Ridge Vineyard at 478 Middle Road, Purga (closed at the time of writing)
- Paradine Estate Wines at 38 North St, Harrisville.

Food trails are a prominent feature, showcasing farms, wineries and cheese making. While there do not appear to be any food trails near the Project alignment, travellers to these and other local attractions, National Parks, lakes and the Summer Hill Camel Farm at Harrisville may need to cross the disturbance footprint to gain access to food trails.

5.4.4 Businesses profile

Table 5-24 shows the number and percentage of registered businesses by industry in the Ipswich and Scenic Rim LGAs in 2016-2017.

Ipswich LGA had twice as many businesses as the Scenic Rim LGA, at 8,914 businesses compared with 4,351 businesses. In 2016-2017 the largest industry sector (as indicated by numbers of businesses) within the Ipswich LGA was construction, with 1,868 businesses, or 21 per cent of the total number. The transport, postal and warehousing industry represented 11.5 per cent of businesses, indicating that Ipswich LGA will also be well positioned for involvement in opportunities that could be supported by the Project e.g. transport facilities and industrial developments.

The Scenic Rim LGA's largest industry by number of businesses was agriculture, forestry and fishing (at 25.9 per cent of businesses), nearly three times more than their representation in Queensland (at 9.5 per cent). Many of these businesses are small farming operations. In 2015-2016 the total value of agricultural output from the Scenic Rim was $25 8 million. From this monetary output, livestock slaughtering was the largest commodity, accounting for 55.2 per cent of the total value (idcommunity 2018).

The construction industry is also strong in the Scenic Rim LGA, with the second largest number of businesses at 726 businesses in 2016-17. Being a significant regional growth area, housing development and associated infrastructure is strengthening growth in this business sector. Nearby development projects include the Springfield housing development, Ipswich Health Precinct, Ripley Valley master planned community, and the redevelopment of the Ipswich CBD (ICC 2018).

Noting that construction businesses range across domestic, commercial and major civil construction sectors, the strength of the construction industry in the Ipswich and Scenic Rim LGAs will support the availability of suitably skilled and experienced personnel for Project construction.

Table 5-24: Registered businesses by industry (number and percentage of total businesses) Ipswich LGA and Scenic Rim LGA, 2016-17

Industry	Ipswich (C) LGA		Scenic Rim (R) LGA	
	No.	%	No.	%
Agriculture, forestry and fishing	369	4.1	1,129	25.9
Mining	24	0.3	9	0.2
Manufacturing	484	5.4	176	4.0
Electricity, gas, water and waste services	30	0.3	21	0.5
Construction	1,868	21.0	726	16.7
Wholesale trade	219	2.5	129	3.0
Retail trade	568	6.4	235	5.4
Accommodation and food services	338	3.8	175	4.0
Transport, postal and warehousing	1,029	11.5	229	5.3
Information media and telecommunications	56	0.6	31	0.7
Financial and insurance services	491	5.5	188	4.3
Rental, hiring and real estate services	729	8.2	352	8.1
Professional, scientific and technical services	843	9.5	330	7.6
Administrative and support services	410	4.6	120	2.8
Public administration and safety	24	0.3	9	0.2
Education and training	140	1.6	43	1.0
Health care and social assistance	566	6.3	135	3.1

Industry	Ipswich (C) LGA		Scenic Rim (R) LGA	
	No.	%	No.	%
Arts and recreation services	121	1.4	78	1.8
Other services	522	5.9	201	4.6
Not classified	96	1.1	38	0.9
Total	8,914	100.0	4,351	100.0

Source: ABS 8165.0, Counts of Australian Businesses, including Entries and Exits, various editions

Table 5-25 shows the employment size of registered businesses within the Scenic Rim LGA and the Ipswich LGA in 2016-2017. The majority were small businesses. In the Ipswich LGA, 61.5 per cent of businesses had no employees (e.g. sole operators, including farmers), while 27.4 per cent of business employed between just one to four employees. In the Scenic Rim LGA the percentage of non-employing businesses was even higher at 66.3 per cent, with 25.1 per cent of businesses employing one to four employees.

Table 5-25: Registered businesses by employment size, number and percentage of total businesses) Ipswich LGA and Scenic Rim LGA, 2016-2017

LGA	Non-employing		1-4 employees		5-19 employees		20-199 employees		200 + employees		Total
	No.	%	No.	%	No.	%	No.	%	No.	%	No.
Ipswich	5,478	61.5	2,442	27.4	784	8.8	200	2.2	4	0.0	8,914
Scenic Rim	2,885	66.3	1,091	25.1	321	7.4	58	1.3	0	0.0	4,351

Source: ABS 8165.0, Counts of Australian Businesses, including Entries and Exits, various editions

5.4.5 Training and employment policies

Government strategies and programs are summarised below. Training programs offered as part of these programs are generally market driven, with needs identified and addressed as they emerge.

Regional Skills Investment Scheme

The Regional Skills Investment Scheme (RSIS) is a Queensland Government initiative which aims to support selected regional communities to identify current and emerging jobs in key industries, and support skills development programs to ensure the local workforce has the skills to meet demand. ICC and SRRC are both participating in the scheme, with projects that aim to:

- Promote and tailor existing vocational education and training investment opportunities to better link individuals to local training and employment
- Improve alignment of training solutions with local workforce needs
- Identify gaps in service delivery and develop regional training opportunities to address local training needs
- Provide local industries with skilled local people to meet the LGAs' industry growth and innovation demands.

ICC RSIS projects will focus on skills required for the advanced manufacturing, defence industries and transport and logistics sectors, whilst SRRC is focussing on the health, primary industry and tourism sectors. Inland Rail will cooperate with RSIS officers in each Council to identify opportunities for cooperation in skills development.

Jobs Queensland

Jobs Queensland is an independent statutory entity established by the Queensland Government to provide strategic advice to the Government on future skills requirements, workforce planning and development issues and the apprenticeship and traineeship system.

Jobs Queensland's 'Positive Futures: Apprenticeships and Traineeships in Queensland' Discussion Paper (Jobs Queensland 2016), notes that after trending upwards for over a decade during the mining boom, apprenticeship commencements in Queensland began to fall in 2007, but were recovering by 2016. Queensland Government programs that support apprentices and trainees include:

- Registered Trades Skill Pathway and Trade Skills Assessment and Gap Training which help existing workers to gain trade qualifications
- User Choice which funds the training of eligible apprentices and trainees
- Industry Pre-Apprenticeship Programs which work in partnership with industry to develop tradespeople in priority trade occupations
- Work Start, which provides a one-off payment of $10,000 to private sector employers who employ a recent participant of particular Skilling Queenslanders for Work programs into a traineeship or apprenticeship.

Jobs Queensland is currently working with ICC to support skills and employment growth in the region with a focus on the manufacturing industry.

Skilling Queenslanders for Work

Skilling Queenslanders for Work (Queensland Government 2016a) is an initiative providing training to people who are under-utilised or under-employed in the labour market, and building the skills of young people, Indigenous people, people with a disability, mature-age job seekers and people from culturally and linguistically diverse backgrounds. Local community ownership of projects is a cornerstone of the initiative. The range of programs offered by Skilling Queenslanders for Work includes:

- Community Work Skills, which delivers tailored support and assistance towards nationally recognised skills and qualifications.
- Work Skills Traineeships, which funds paid work placements on community, public works and environmental projects
- Ready for Work, which funds community-based organisations to deliver basic job preparation and employability skills courses
- Get Set for Work, which delivers intensive employment and training assistance to early school leavers and disadvantaged young people.

Back to Work Regional Employment Package

The Back to Work package (Queensland Government 2016b) is aimed at increasing business confidence and employment prospects for regional jobseekers. Employers, jobseekers, and the Back to Work Teams work together to build regional networks, build regional capacity, and create local opportunities. This initiative includes:

- Support payments of $10,000-$20,000 for employers to take on jobseekers in regional Queensland
- Training for eligible jobseekers to gain the skills including Certificate 3 qualifications
- Back to Work Teams working with local employers and jobseekers.

Workforce diversity

The Queensland Women's Strategy 2016-21 (DCCSDS 2016) provides a framework for Government, the private sector and the wider Queensland community to take significant action to achieve gender equality in Queensland. The Strategy's four priority areas include participation and leadership; economic security; safety; and health and wellbeing. The plan provides a list of initiatives that government, business and the community have committed to delivering, working together to achieve gender equality in Queensland.

Advancing Indigenous education and training

The Department of Education and Training has released a draft action plan for Advancing Aboriginal and Torres Strait Islander Education (DET 2016b) aimed at driving higher expectations and achieving better outcomes for Queensland's Aboriginal and Torres Strait Islander communities across early childhood education, school education, vocational education and training, and higher education.

Highlights from the draft action plan with relevance to the SIA include:

- Prioritising participation of Aboriginal and Torres Strait Islander people under the Annual Vocational Education and Training (VET) Investment Plan to engage in training that offers social and economic benefits
- Funding for Aboriginal and Torres Strait Islander-specific projects under Skilling Queenslanders for Work to provide skills development, nationally recognised training and job opportunities.

5.5 Housing and accommodation

5.5.1 Housing access

Occupied and unoccupied dwellings

The Scenic Rim LGA recorded a higher percentage of unoccupied private dwellings (8.9 per cent), compared to the Ipswich LGA (6.9 per cent) as shown in **Table 5-26**. Within the SA2s, Boonah recorded a higher percentage of unoccupied private dwellings (9.1 per cent) compared to Rosewood (6.6 per cent). Amongst State suburbs, Rosewood recorded the highest percentage of unoccupied private dwellings (7.0 per cent), whilst the suburb of Ebenezer recorded no unoccupied private dwellings.

Table 5-26: Dwelling occupancy 2016 (percentage of private occupied dwellings)

Statistical Area	Private Dwelling Occupancy	
	Occupied (% of total)	Unoccupied (% of total)
Calvert	94.2	5.8
Rosewood	93.0	7.0
Ebenezer	100.0	0.0
Willowbank	94.6	5.4
Purga	94.8	5.2
Peak Crossing	93.4	6.6
Ipswich LGA	93.1	6.9
Scenic Rim LGA	91.1	8.9
Queensland	89.4	10.6

Source: ABS Census 2016

Housing Type

Table 5-27 shows that predominant dwelling type in 2016 within the Scenic Rim LGA was separate housing, making up 91.8 per cent of the available housing stock. Within the Ipswich LGA 88.3 per cent of housing stock was separate housing. The Ipswich LGA recorded a higher percentage of semi-detached, row or terrace housing (9 per cent) and flat or apartments (1.8 per cent) compared to the Scenic Rim LGA, which recorded 3.9 per cent and 1.5 per cent respectively.

The predominant dwelling structure within the SA2s of Boonah and Rosewood, was separate housing (94.6 per cent and 92.3 per cent respectively).

Within the State suburbs of Calvert, Ebenezer, Peak Crossing and Purga 100 per cent of housing stock was recorded as separate housing. Willowbank and Rosewood recorded 10.8 per cent and 0.4 per cent respectively of available housing stock as flat or apartments. Rosewood recorded 7.8 per cent of housing stock as detached row or terrace house, town house.

In Queensland a higher percentage of semi-detached, row or terrace house, townhouse and flat or apartment (10.6 per cent and 11.3 per cent respectively) was noted, compared to all other localities.

Table 5-27: Dwelling Structure (Private Dwellings), 2016 (%)

Statistical Area	Separate house	Semi-detached, row or terrace house, townhouse	Flat or apartment	Other dwellings	Not stated
Calvert	100.0	0.0	0.0	0.0	0.0
Rosewood	91.2	7.8	0.4	0.4	0.3
Ebenezer	100.0	0.0	0.0	0.0	0.0
Willowbank	66.8	0.0	10.8	22.3	0.0
Purga	100.0	0.0	0.0	0.0	0.0
Peak Crossing	100.0	0.0	0.0	0.0	0.0
Ipswich LGA	88.3	9.0	1.8	0.6	0.3
Scenic Rim LGA	91.8	3.9	1.5	2.3	0.4
Queensland	76.6	10.6	11.3	1.0	0.5

Source: ABS Census 2016

Housing tenure

In 2016, as shown in **Table 5-28**, the Ipswich LGA recorded a high percentage of properties that were rented (37.5 per cent) whilst the Scenic Rim LGA recorded a much lower percentage of rental properties (22.8 per cent). The Scenic Rim LGA recorded a high percentage of properties owned outright (34 per cent) compared to the Ipswich LGA (20.3 per cent).

Amongst the SA2s, Boonah had the highest percentage of properties owned outright (40.7 per cent), which was lower in Rosewood SA at (31.7 per cent). Within the local communities, Ebenezer recorded the highest percentage of properties owned outright (41 per cent) compared to the lowest percentage (27.2 per cent) recorded in Willowbank.

A similar percentage of properties owned with a mortgage was recorded in both the Ipswich and Scenic Rim LGAs (34 per cent and 33.2 per cent respectively). The State suburb of Peak Crossing recorded the highest percentage of properties owned with a mortgage, compared to the lowest percentage recorded in Rosewood (42.2 per cent and 25 per cent respectively).

Table 5-28: Housing tenure as percentage of all households, 2016

Statistical Area	Owned outright	Owned with a mortgage	Rented	Other/not stated	Total
	%	%	%	%	%
Calvert	37.9	40.8	15.5	5.8	100.0
Rosewood	28.2	25.0	36.3	10.5	100.0
Ebenezer	41.0	28.7	13.9	16.4	100.0
Willowbank	27.2	39.5	21.7	11.6	100.0
Purga	37.9	28.6	24.3	9.2	100.0
Peak Crossing	29.9	42.2	21.4	6.5	100.0
Ipswich LGA	20.3	34.0	37.5	8.2	100.0
Scenic Rim LGA	34.0	33.2	22.8	10.0	100.0
Queensland	28.5	33.7	34.2	3.6	100.0

Source: ABS Census 2016

Indigenous housing access

Indigenous people who participated in consultation noted that are they are vulnerable to changes in housing affordability or availability.

QGSO data generated from the ABS Census of Population and Housing 2016 (QGSO 2019) indicate that higher percentages of Indigenous households had low incomes in 2016, with 17.7 per cent of Indigenous households having median weekly incomes of $150–399/week compared to 10.1 per cent for non-Indigenous households in the Scenic Rim LGA. In the Ipswich LGA, 18.9 per cent of Indigenous households had median weekly incomes of $150–399/week compared to 9.3 per cent for non-Indigenous households.

In 2016, 64.5 per cent of Indigenous households in the Ipswich LGA were renting their home, compared to 38.2 per cent for non-Indigenous households. Median weekly rents were $295/week for Indigenous households and $310/week for non-Indigenous households, indicating that the availability of affordable rental housing is particularly important to Indigenous people.

In the Scenic Rim LGA 50.1 per cent of Indigenous households were renting their home, compared to 23.4 per cent for non-Indigenous people. Median weekly rents were $295/week for Indigenous households and $310/week at non-Indigenous households. Median weekly rents were the same for Indigenous households and non-Indigenous households at $295/week

Indigenous households were also more likely to have over-crowded housing than non-Indigenous households, at 6.3 per cent of Indigenous households in the Scenic Rim LGA and 9.4 per cent of households in the Ipswich LGA, compared to 2.1 per cent and 3.1 per cent respectively of non-Indigenous households.

These data indicate that many Indigenous households have less housing security due to low incomes, higher rates of rental tenure and higher rates of overcrowding.

5.5.2 Social housing and homelessness

As shown in **Table 5-29**, in 2016 within the Ipswich LGA, 3.8 per cent of housing was social housing (owned by the Queensland Government or community/church organisations), compared to 1.3 per cent within the Scenic Rim LGA. The SA2s of Rosewood and Boonah recorded low percentages of social housing stock (0.6 per cent and 0.3 per cent respectively). Rosewood was the only noted State suburb with recorded social housing (1.9 per cent).

Table 5-29: Social housing, 2016 – Number and percentage

Statistical Area	Total dwellings No.	Social housing	
		No.	% Total dwellings
Calvert	103	-	0.0
Rosewood	1,062	20	1.9
Ebenezer	122	-	0.0
Willowbank	534	-	0.0
Purga	206	-	0.0
Peak Crossing	308	-	0.0
Boonah SA2	4,573	12	0.3
Rosewood SA2	4,133	23	0.6
Ipswich LGA	67,726	2,594	3.8
Scenic Rim LGA	15,273	195	1.3
Queensland	1,656,831	61,533	3.7

Source: ABS Census 2016

Data on homelessness are available at the SA2 and LGA levels. Within the LGAs of Ipswich and the Scenic Rim, the number of homeless persons decreased by 49 and 41 people respectively from 2011 to 2016, as shown in **Table 5-30**. The number of homeless persons increased slightly in Rosewood (6 people) and decreased in Boonah (23 people).

Table 5-30: Homeless Persons, 2011 and 2016 – Number

Statistical Area	LGA	Persons^		Change
		2011 No.	2016 No.	No.
Boonah SA2	Scenic Rim	62	39	-23
Rosewood SA2	Ipswich	22	28	6
Ipswich LGA		728	679	-49
Scenic Rim LGA		126	85	-41
Total		1,880	1,969	89

Source: ABS Census 2016

Table note:

^Homelessness estimates are derived from Census data collected on Census night and may not be a true representation of actual homelessness.

5.5.3 Housing trends

Purchase availability and prices

Assessment of housing trends has focussed on the postcodes closest to the Project as shown in **Table 5-31**.

The highest median house price was recorded in the Ipswich postcode of 4306, taking in the Willowbank-Peak Crossing, Purga and Washpool areas, at $444,500. The lowest median house price ($363,700) was noted in postcode 4340, which takes in the Calvert- Rosewood - Ebenezer areas. Boonah and surrounding localities (postcode 4310) had a median house price of $396,900, and Beaudesert and surrounding localities (postcode 4285) had a median house price of $428,200.

Over the twelve months to February 2020, postcode 4340 experienced a small decrease in the median house price (0.7 per cent) whilst the other postcodes saw increases of up 6.5 per cent. The median price for units generally decreased, with the largest decrease of 45.4 per cent seen in postcode 4285, however this volatility reflects the small number of units in this area.

Over the three year period to February 2020, the median price of houses increased by 10.1 per cent in postcode 4306, but decreased of up to 5.5 per cent in other postcodes.

At the LGA level, the Scenic Rim LGA recorded a higher median house price ($410,000) than the Ipswich LGA ($347,000) at June 2019. As shown in Table 5-30, in the five years to 2019 the Scenic Rim LGA experienced an increase in median dwelling prices of 15.9 per cent, and the Ipswich LGA had experienced an increase of 12.7 per cent. At February 2020, the median unit price was similar in both LGAs, at $320,000 in the LGA of Ipswich and $310,000 in the Scenic Rim LGA, with no change in the year prior in the Ipswich LGA and a small price fall (0.2 per cent) in the Scenic Rim LGA.

Table 5-31: Median dwelling price for house and units, and percentage change 2019 / 2020

Area Postcode	LGA	House $	1 Year Change %	Other Change %	Unit $	1 Year Change %	Other Change %
				3 year change			3 year change
4340^ (Calvert, Lanefield, Rosewood, Lower Mount Walker, Ebenezer)	Ipswich	363,700	-0.7	-5.5	289,000	0.0	-9.8
4306 (Willowbank, Peak Crossing, Purga, Washpool)	Ipswich	444,500	1.2	10.1	310,200	-8.1	6.4
4310^ (Boonah and surrounding localities)	Scenic Rim	396,900	6.5	-3.8	350,000	-22.2	-12.4
4285 (Beaudesert, surrounding towns, Kagaru, Undullah)	Scenic Rim	428,200	3.0	-2.9	155,000	-45.4	-44.3
Local Government Area*				5 year change			5 year change
Ipswich		347,000	0.9	12.7	320,000	0.0	8.5
Scenic Rim		410,000	-0.1	15.9	310,000	-2.0	N/a

Table note:

^ High volatility is apparent in this area likely due to price differentials in a small (rural) sales market
Source: SQM Research Weekly Asking Prices Index, 4 Feb, 2020 (all houses/all units based on asking price)
*REIQ Queensland Marketing Monitor, Issue 44, Sept 2109 reporting on June Quarter 2019 (based on sales price, sites <2,400m^2)

Rental cost

As shown in **Table 5-32**, at February 2020 postcode 4306 recorded the highest median rent per week for a house ($375) followed by postcode 4825 ($364) and postcode 4340 ($334). The lowest median weekly rent for a house was recorded in postcode 4310 ($304).

The largest increases in median weekly rental costs were seen in postcode 4340 where house rental costs had increased by 15.3 per cent and unit rental costs had increased by 24.7 per cent over the past year, however less volatility is evident over the previous three year period (5.5 per cent and 3.4 per cent respectively).

Rental cost changes were more modest in the other postcodes over the twelve months, with small decreases in house rental costs in postcode 4306 and postcode 4310, and a small increase in postcode 4285. Over the three years to February 2020, house rental costs increased slightly in postcode 4306 (3.1 per cent) and postcode 4285 (5.4 per cent) and decreased by 6.6 per cent in postcode 4310.

Postcode 4285 recorded the highest median weekly rent for units ($316) followed by postcode 4306 ($300), whilst postcode 4310 recorded the lowest ($220). With the exception of postcode 4340 as noted above, rental cost changes for units saw small changes over the one year and three year periods, with the largest one year change seen in postcode 4310 (a decrease of 9.9 per cent) and the largest three year change seen in postcode 4285 (an increase of 9.5 per cent).

Table 5-32: Median weekly rent (postcode) and three year percentage change to February 2020

Post Code	LGA	House $/week	1 Year Change %	3 Year Change %	Unit $/week	1 Year Change %	3 Year Change %
4340^	Ipswich	334	15.3	5.5	279	24.7	3.4
4306	Ipswich	375	-1.6	3.1	300	-4.3	-5.2
4310^	Scenic Rim	304	-2.0	-6.6	220	-9.9	-7.1
4285	Scenic Rim	364	1.1	5.4	316	1.2	9.5

Table note:
^ High volatility is apparent in this area likely due to price differentials in a small (rural) sales market
SQM Weekly Rents Index (Median Weekly Asking Rent) 4 Feb 2020
Source: SQM Research

Rental vacancy rates

Rental vacancies for postcode areas in the Project area are shown in **Table 5-33**. As the majority of rental dwellings available in the Ipswich LGA are located in Ipswich's central suburbs, data are also provided for the corresponding postcode (4305) to provide a broader indication of the availability of rental housing.

The highest number of rental properties available in June 2019 was in postcode 4305 (260 properties) followed by postcode 4306 which represents the Willowbank, Peak Crossing, Purga, Washpool area (89 properties) and postcode 4285 representing the Beaudesert, Kagaru, Undullah area (83 properties). Postcode 4340 which corresponds to the Calvert, Lanefield, Rosewood, Lower Mount Walker and Ebenezer area had a very small rental pool available (12 properties) as did postcode 4310 (Boonah and surrounding localities) which had 12 rental properties available. Vacancy rates ranged from a low 1,1 per cent in the Boonah area and 1.9 per cent in the Calvert- Rosewood – Ebenezer area to 3.3 per cent in the Beaudesert postcode area.

Recent changes (June – December 2019) have generally seen increases in the availability of rental dwellings, with 275 dwellings available in postcode 4305 (an additional 15 dwellings since June 2019) and 119 in postcode 4306 (an additional 30 dwellings), and a decrease of one dwelling in postcode 4825 (to 82 dwellings). Small pools of rental housing remained available in the 4340 and 4310 postcodes with 17 dwellings each. Rental vacancy rates had increased with the exception of postcode 4285 which dropped 0.1 of a percentage point in the six month period to 3.2 per cent. Rental vacancy rates in other postcodes ranged from to 2.4 per cent in postcode 4305 to 4.2 per cent in postcode 4306, with rates over 3 per cent indicating a healthy rental market) (REIQ, 2019).

Table 5-33: Rental vacancies for post codes, June 2018 – June 2019

Postcode area	LGA	June 2018		June 2019		December 2019	
		Vacant dwellings No	Vacancy rate %	Vacant dwellings No	Vacancy rate %	Vacant dwellings No	Vacancy rate %
4305 (Ipswich Centre)	Ipswich	270	*2.5*	*260*	*2.3*	*275*	*2.4*
4340	Ipswich	10	*1.6*	*12*	*1.9*	*17*	*2.6*
4306	Ipswich	102	*3.9*	*89*	*3.2*	*119*	*4.2*
4310	Scenic Rim	6	*1.1*	*13*	*2.4*	*17*	*3.2*
4285	Scenic Rim	61	*2.5*	*83*	*3.3*	*82*	*3.2*

Source: SQM Research

5.5.4 Building approvals

As shown in **Table 5-34** the Ipswich LGA recorded 3,475 dwelling approvals in 2016-2017, more than ten times the number recorded in the Scenic Rim LGA (311). Rosewood recorded the highest number of dwelling approvals in the SA2s (109), compared to Boonah (69).

Table 5-34: Dwelling approval numbers, 2016-2017

Statistical Area	New dwellings (No.)
Boonah SA2	69
Rosewood SA2	109
Ipswich LGA	3,475
Scenic Rim LGA	311
Total	6,255

Source: ABS Building Approvals, Australia, May 2018

5.5.5 Short term accommodation

Hotels and motels throughout Ipswich, Boonah and Beaudesert area offer short-term accommodation, increasingly accessible through online platforms.

Near the EIS investigation corridor, the following properties offering accommodation were identified:

- Flinders Peak Winery (20 villas), approximately 1.1 km west of the disturbance footprint at Ch 31.6 km

- IRCEC at Peak Crossing, including campgrounds (with approximately 2,000 campsites), cabins and a lodge, with units planned, approximately 1 km east of the disturbance footprint at around Ch 29.0 to 30.0 km
- Willowbank Caravan Park and Motel, approximately 3.4 km north of the disturbance footprint at Ch 17.0 km, with approximately 100 cabin and caravan sites, and approximately 26 motel rooms
- Palm Meadows Home Village approximately 3.3 km north of the disturbance footprint at Ch 17.0 km, with approximately 50 small dwellings accommodating seniors
- Amberley Caravan Park, approximately 3.7 km north of the disturbance footprint at Ch 17.1 km, with approximately 65 cabin and caravan sites.

The latest tourism accommodation data provided by the ABS were produced for 2015-2016 (ABS 2016) and indicate that the Ipswich LGA had a total of 10 tourism accommodation establishments with more than 15 rooms in June 2016. This included five tourism accommodation establishments in the Ipswich city centre, providing a total of 280 rooms, and with a room occupancy rate of 66 per cent (occupancy rates for other areas within the Project region were not available). From an available stock of at least 280 rooms, this would see an average of approximately 95 available rooms.

A scan of various tourism accommodation search sites in November 2019 identified eight motels and two short term unit rental establishments in the Ipswich LGA, with a total of approximately 300 rooms, plus various bed and breakfast options.

The ABS data indicate that Boonah and Beaudesert each had one tourism accommodation establishment with more than 15 rooms in 2016. Observation indicates that the motel in Beaudesert has approximately 25 rooms and the motel in Beaudesert had approximately 30 rooms.

Analysis of overnight visitor numbers provided by id Profile (using unpublished data provided by Tourism Research Australia) indicates that the number of visitor nights in Ipswich LGA in 2018/19 was approximately 22 per cent higher than in 2015/16 (id Profile, 2019). Data for the Scenic Rim LGA indicate an increase in the number of visitor nights between 2015/2016 and 2018/2019 of 66 per cent, indicating substantial increases in demand for tourism accommodation over this period (Ibid).

5.6 Social infrastructure

This section describes social infrastructure, including childcare, educational facilities, aged care services, health facilities, emergency services, cultural services and recreational facilities near the EIS investigation corridor.

5.6.1 Childcare

As of February 2018, shown in **Table 5-35**, there were 153 early childhood education and care services in the Ipswich LGA, 70 of which were long day care services. Within the Scenic Rim LGA, 23 early childhood education and care services were noted, eight of which were long day care services.

The greater number of early childhood services within the Ipswich LGA is due to the higher proportion of young persons and families as well as the larger population there, when compared to the Scenic Rim LGA.

The nearest childcare centres to the disturbance footprint are located:

- Approximately 4 km to the east in Rosewood – two childcare centres and one kindergarten
- Approximately 2 km to the west in Peak Crossing – one childcare centre.

Table 5-35: Childhood education and care services, 2018

LGA	Family day care	Kindergartens	Long day care	School aged care	Limited house care	Total [(a)]
	No.					
Ipswich	13	27	70	41	0	153
Scenic Rim	3	6	8	6	0	23

Table note:

(a) Total includes Other service types (for example Child and Family Support Hubs and Community Services).

Source: Office for Early Childhood Education and Care, Department of Education 2018

5.6.2 Primary and secondary education

Primary and secondary education facilities whose school catchments are crossed by the disturbance footprint are shown in **Table 5-36**.

Amberley District State School was the largest State school with 818 total enrolments. Due to the expansion of the RAAF Base Amberley, the school relocated to its current location in the suburb of Yamanto, in 2012. The smallest noted Primary School was Mutdapilly, with 30 enrolled students.

Flagstone State Community College within the Logan LGA was the largest secondary school with 821 enrolled students.

Table 5-36: Primary and secondary education facilities

School	Enrolment 2018 (no.)	LGA	Proximity to the Project
Grandchester State School	39	Ipswich	Catchment area covers part of Project
Rosewood State School	281	Ipswich	Catchment area covers part of Project
Ashwell State School	52	Ipswich	Catchment area covers part of Project
Amberley District State School	818	Ipswich	Southern part of catchment area adjoins Project
Mutdapilly State School	30	Scenic Rim	Catchment area covers part of Project
Peak Crossing State School	215	Scenic Rim	Catchment area covers part of Project
Roadvale State School	37	Scenic Rim	Catchment area covers small portion of Project
Flagstone State School	713	Logan	Catchment area covers part of Project
Woodhill State School	204	Logan	Small portion of the catchment area covers end of Project at Kagaru
Rosewood State High School	432	Ipswich	Catchment area covers part of Project
Boonah State High School	699	Scenic Rim	Catchment area covers part of Project
Flagstone State Community College	821	Logan	Catchment area covers part of Project

Source: Queensland Government Schools Directory 2018

5.6.3 Further education and training

TAFE Queensland has a campus located in the suburb of Bundamba within the Ipswich LGA, offering courses in hospitality, nursing, event management, horticulture and beauty. Another TAFE Qld campus located in Springfield (Ipswich LGA) offers courses in early childhood education, aged care, youth work, justice studies, business and graphic design (TAFE Queensland 2018).

A University of Southern Queensland (USQ) campus is located close to the centre of Ipswich. Approximately 1,500 students study a range of courses at the campus. The campus was officially established in 2015 and was previously owned and operated by the University of Queensland (UQ). USQ operates another campus at Springfield, on the outskirts of the Ipswich LGA (University of Southern Queensland 2018).

UQ operates a large campus in Gatton, within the Lockyer Valley LGA, which also services residents in the SIA study area. There is onsite accommodation, a bioscience research precinct, sporting facilities, veterinary services, farms and various food services. In 2017 there were 1,735 enrolled students. The Warrego Highway provides an important link for the Gatton campus, from Toowoomba to the west and Brisbane/Ipswich to the west (University of Queensland 2018).

5.6.4 Hospital and health services

Health services in the SIA study area are presented in **Table 5-37** and **Table 5-38**. The SIA study area is serviced predominately by smaller General Practitioner (GP) clinics. The Flinders Peak Medical Centre and Fassifern Doctors located in Boonah were the largest clinic identified.

Table 5-37: Primary health services

Statistical Area	LGA	Facility/Service	No. Practitioners *
Rosewood	Ipswich	The Lockyer Doctors Rosewood	3
Rosewood	Ipswich	Rosewood General Practice	4
Willowbank	Ipswich	Willowbank Surgery	1
Purga	Ipswich	Flinders Peak Medical Centre	11
Yamanto	Ipswich	Yamanto Family Practice	2
Boonah	Scenic Rim	Boonah Medical Centre	4
Boonah	Scenic Rim	Fassifern Doctors	9
Kalbar	Scenic Rim	Kalbar Medical Centre	4
Flagstone	Logan	Flagstone Pioneer Health Service	2

* Approximate

Source: Australian Government, Department of Health, National Health Services Directory 2018

Patients who require treatment beyond basic services are referred to Ipswich Hospital, which is part of the West Moreton Hospital and Health Service that provides services to the entire West Moreton region. The hospital offers services in all major health specialties, and a full range of allied health services. The Queensland Government committed capital funds to accommodate an additional 84 beds and associated facilities/services in 2014, with the hospital now offering 388 patient beds (Queensland Health 2018).

The other major hospital in the SIA study area is the Beaudesert Hospital that services the Scenic Rim LGA. The hospital offers 24-hour emergency services, general surgery, Indigenous Health, maternity, mental health and palliative care services. The Boonah Hospital also offers a range of services with a particular focus on the health of seniors but including a range of community health services (Queensland Health 2018).

Health service providers who participated in SIA consultation noted that there was a need for increased use of existing services which support people dealing with mental health issues.

Table 5-38: Hospital and Health Service Profile

Service type	Boonah Health Service	Ipswich Hospital	Beaudesert Hospital
Hospital services	22 beds Emergency Department, General Medicine, Palliative Care, Interim Care, Transitional Care, Rehabilitation, Cardiologist	439 beds All major health specialities including anaesthetics, emergency medicine, medicine, surgery, intensive and coronary care, orthopaedics, obstetrics, paediatrics, palliative care and rehabilitation along with a full range of allied health services	36 beds Emergency Department, General Surgery, Indigenous Health services Maternity services Mental Health services Palliative Care
Allied health services	Physiotherapist, Social Worker, Speech Pathology, Dietician, Diabetes Educator, Podiatrist	Full range of allied health services offered	Aboriginal and Torres Strait Islander community liaison, Child health, Physiotherapist, Social Worker, Speech Pathology, Dietician
Community health services	Community Health Nurse, Child Health, Mental Health, Alcohol Tobacco and Other Drugs, HACC services, Diabetes Support Service	Full range of community health service including Community Health Nurse, Child Health, Mental Health, Alcohol Tobacco and Other Drugs, HACC services, Diabetes Support Service	Community Health Nurse, Child Health, Mental Health, Alcohol Tobacco and Other Drugs, HACC services, Diabetes Support Service

Source: Queensland Department of Health 2018

5.6.5 Aged care services

The Ipswich LGA had a total of 24 aged care services and 1,318 operational community, residential and transition care places. The Scenic Rim had 11 aged care services within the LGA in 2016 and 520 community, residential and transition care places (refer **Table 5-39**).

The closest aged care facility to the disturbance footprint (at approximately 4 km to the east), is Cabanda Care at Rosewood which provides residential services and access to registered nurses and care staff. There is also a retirement village connected to Cabanda Care that offers independent living arrangements (Cabanda Care 2018).

Table 5-39: Aged care services, Ipswich and Scenic Rim LGA, 30 June 2016

LGA	Number of aged care services	Number of operational places by care type			
		Community care	Residential aged care	Transition care	Total places
	No.	No.	No.	No.	No.
Ipswich	24	401	881	36	1,318
Scenic Rim	11	188	332	0	520

Source: Australian Government Department of Health and Ageing 2018

5.6.6 Police, Emergency Services and Justice

Table 5-40 profiles QPS, QAS and QFES stations in the Ipswich and Scenic Rim LGA's. A similar number of emergency services were noted in the LGAs, except for one more ambulance station and two more fire stations noted in the Scenic Rim LGA. This is likely attributable to the Scenic Rim covering a wider geographic area and having a potentially higher bush fire threat, due to the rural nature of the area.

Table 5-40: Emergency services, June 2018

LGA	Police stations (QPS)	Ambulance stations (QAS)	Fire stations (QFES)	Justice
Ipswich	7	4	6	Ipswich Courthouse
Scenic Rim	7	5	8	Beaudesert Magistrates Court

Source: QGSO, QAS, QFES, QPS 2018

Within proximity to the Project the following Police Stations are located:

- Rosewood Police Station – John Street, Rosewood
- Harrisville Police Station – Church Street, Harrisville
- Boonah Police Station – Highbury Street, Boonah.

Within proximity to the Project the following Fire Stations are located:

- Rosewood Fire Station – John Street, Rosewood
- Harrisville Fire Station – Queen Street, Harrisville
- Warrill View Rural Fire Brigade – Bath Street, Warrill View
- Flinders Peak Rural Fire Brigade – Flinders Dolomite Road, Peak Crossing
- Roadvale Rural Fire Brigade – Gray Street, Roadvale.

Within proximity to the Project the following Ambulance Stations are located:

- Rosewood Ambulance Station – John Street, Rosewood
- Boonah Ambulance Station.

For larger scale emergencies within the SIA study area, emergency services are provided from Ipswich.

The results of consultation with local emergency service providers indicated the need for cooperation with services, prior to the construction period, to ensure planning for service capacity is informed by accurate workforce estimates and construction programming.

5.6.7 Community and civic services

Table 5-41 details key community and civic facilities and community support services within Rosewood, Willowbank, Purga and Peak Crossing. There were no services identified in Ebenezer, Calvert or Kagaru. The community centres and halls each host a wide range of Council and community-supported services, cultural events, and community activities.

A wide range of community organisations, church organisations, charitable foundations and government agencies provide services throughout the SIA study area. Key community service providers in the Ipswich LGA include:

- Ipswich Community Youth Service
- Focal Community Service and Access Community Services (supporting people with disability)

- Ipswich Housing and Support Services Inc (supporting people experiencing housing security issues including homelessness)
- Uniting Care and BlueCare which provide a range of services, particularly for seniors and people with disability
- Liworaji Aboriginal Corporation which provides training and support services for Indigenous people and families
- Anglicare and Centacare, which provide a range of community services to families, young people, seniors and people with disability,
- the Richmond Fellowship, which supports people experiencing mental health issues and social disadvantage.

Community service providers operating in the Scenic Rim LGA include:

- Beaucare, providing a range of community, family, disability and seniors' support programs and the Beaudesert Community Centre
- Jymbilung House, providing services for senior sand people with disability
- Bluecare offering residential and home based care for seniors and people with disability
- Rural Lifestyle Options, a disability service
- CentaCare St Mary's Community Services providing aged care, carer support services for people with disability
- Mununjali Housing and Development offering a range of support services for Indigenous people
- YFS based in Logan and partnering with local organisations to provide a range of youth, individual and family support services
- Beenleigh Community Neighbourhood Centre, offering family and individual support services
- Lives Lived Well, which offers support for people with drug, alcohol or mental health issues.

There is no published information regarding the current adequacy of various service types to community needs, current and future, in the SIA study area. The adequacy of community services to community needs differs across service types, and community needs change over time in line with demographic characteristics (e.g. unemployment levels and increasing percentages of seniors), emerging community needs (e.g. support needs related to drought conditions), changes to Commonwealth and State government funding decisions and the distance between impacted communities and service centres. Consultation participants did not identify any specific community service deficits., and consultation with the Darling Downs and West Moreton Primary Health Network (PHN) and the Brisbane South PHN indicated that local support services have capacity to assist local residents experiencing stress related to the Project.

Table 5-41: Community and civic and support services in potentially affected communities

Location	Community and Civic Facilities Services	Community and Family Support
Rosewood	Rosewood Community Centre/Rosewood and District Support Centre	Queensland Country Women's Association Rosewood and District Support Centre Rosewood RSL Club
Willowbank	Nil	Defence Community Organisation – Amberley
Purga	Nil	Purga Friends Association Inc
Peak Crossing	Peak Crossing Hall	Peak Crossing Hall Committee

Source: My Community Directory 2018

5.6.8 Recreation and cultural facilities

Major facilities and parks

Resident and visitors to the Scenic Rim LGA have access to various trails and tracks for horse riding, bush walking and mountain biking. The Scenic Rim LGA includes protected areas totalling 502 km^2 as at 2018, of which 496.6 km^2 was designated as National Park. The LGA has extensive areas of natural heritage including six National Parks (the Lamington, Tamborine, Mt Barney, Main Range, Moogerah Peaks and Mount Chinghee National Parks) offering a range of active recreation and nature-based pursuits.

Ipswich LGA has only 3.6 km^2 designated as Protected Area (QGSO 2018. Regional Profiles), however it has extensive parks and reserves, whilst smaller communities have access to a range of parks and open spaces on the fringes of communities.

Lake Moogerah (near Boonah) is a popular recreation, fishing and camping destination, whilst Lake Maroon (on Burnett Creek) is a popular destination for recreation, particularly power boating, water skiing and fishing. Lake Wyaralong to the south of the Project is another destination surrounded by an extensive network of walking, biking and horse riding trails.

As described in Section 5.4.3, Ipswich Motorsport Precinct or Albert Theaker Park is approximately 230 m north of Ch 14.2 km to Ch 16.0 km, adjacent to the Cunningham Highway and to the south of the previously operational Ebenezer coal mine.

Flinders Peak Conservation Park (located approximately 4.5 km east of the Project around Ch 34.0 km to Ch 36.0 km) is owned or controlled by ICC but not protected under the *Nature Conservation Act 1992* (Qld). The Park is an undeveloped, scenic area on the Teviot Range, with a large day use area for visitors and various walking trails (ICC 2017).

Other facilities and recreational areas near the Project include:

- A model plane facility and a paintball recreation centre within 1 km of Calvert township
- Bergmans Road nature walk (Rosewood District Protection Organisation 2013) 1.5 km north of Ch 12.2 km
- Rosewood Railway Museum and associated historical rail facility 4.5 km north-east of Ch 6.4 km.

Trails

The Boonah to Ipswich Trail Plan (Queensland Government, 2011) identifies a planned but unconstructed route for a 74 km multi-use trail which would pass through an extensive rugged, regionally and culturally significant landscape and connect Boonah and Ipswich. The status of planned works to develop the trail is uncertain, as acquisition of private properties within the planned corridor did not occur, and plans were ‘mothballed’ in 2012.

Purga Nature Reserve has large remnant of Swamp Tea-Tree, and the facilities provide short, self-guided walks including the 350 m wheelchair-accessible Tea Tree Boardwalk Circuit 240 m north of the disturbance footprint at Ch 22.0 km. The Project will not impact on the land use of the Purga Nature Reserve as the disturbance footprint does not traverse land identified to be within the Reserve.

The proposed 43 km long recreational Beaudesert to Bethania Rail Trail on a disused rail trail is located 6 km east of the Project at Ch 1.4 km (near Kagaru) and is not expected to be impacted.

Table 5-42 details sport and recreations facilities and arts, culture and amenity facilities within Rosewood, Willowbank, Purga and Peak Crossing. There were no facilities identified in Ebenezer, Calvert or Kagaru.

Table 5-42: Recreation and cultural facilities

Location	Sport and Recreation	Arts, Culture, Amenity
Rosewood	Rosewood Little Athletics Rosewood Hack and Pony Club Rosewood Senior Rugby League Club Rosewood Junior Rugby League Football Club Anzac Park Sport and Recreation Rosewood National Fitness Gymnastics Club Rosewood Aquatic Centre Rosewood Bowls Club Rosewood Golf Club Inc	Rosewood Show Society Rosewood Lions Club
Willowbank	Ipswich Switches Speedway Club Hattonvale and District Dirt Kart Club Willowbank Raceway Queensland Raceway Queensland Scrutineering Association RAAF Amberley Bowls Club	
Purga	Swifts Junior Rugby League	Purga Music Museum Ironbark Ridge Vineyard Purga Nature Reserve
Peak Crossing	Ipswich Drum Circle Flinders Peak Conservation Park Peak Crossing Social Dance Boonah to Ipswich Trail	

Source: SRRC, My Community Directory 2018

5.7 Health and wellbeing

This section describes community health determinants, health status and community safety in potentially affected communities and the Project region, as determined by data availability.

5.7.1 Community survey inputs

The SIA community survey requested respondents to comment on their perceptions of attributes of community wellbeing in the SIA study area. Figure 5-5 presents the weighted average of community responses from to a series of value statements as shown (based on a scale of 1= strongly disagree; 2 = disagree; 3= neutral; 4= agree; and 5=strongly agree). The weighted average of total survey responses for this question (n=306) are provided for comparison.

The most highly rated attributes were the community's clean environment and the quality of life. The lowest ratings were in relation to the quality of road connections between towns.

A complex interaction of social, economic, environmental, behavioural and genetic factors helps to shape a population's health and wellbeing, with social and economic conditions amongst the most important. A safe environment, adequate income, meaningful social roles, secure housing, higher levels of education and social support are all associated with better health (McKiernan et al 2005). Key factors are outlined below.

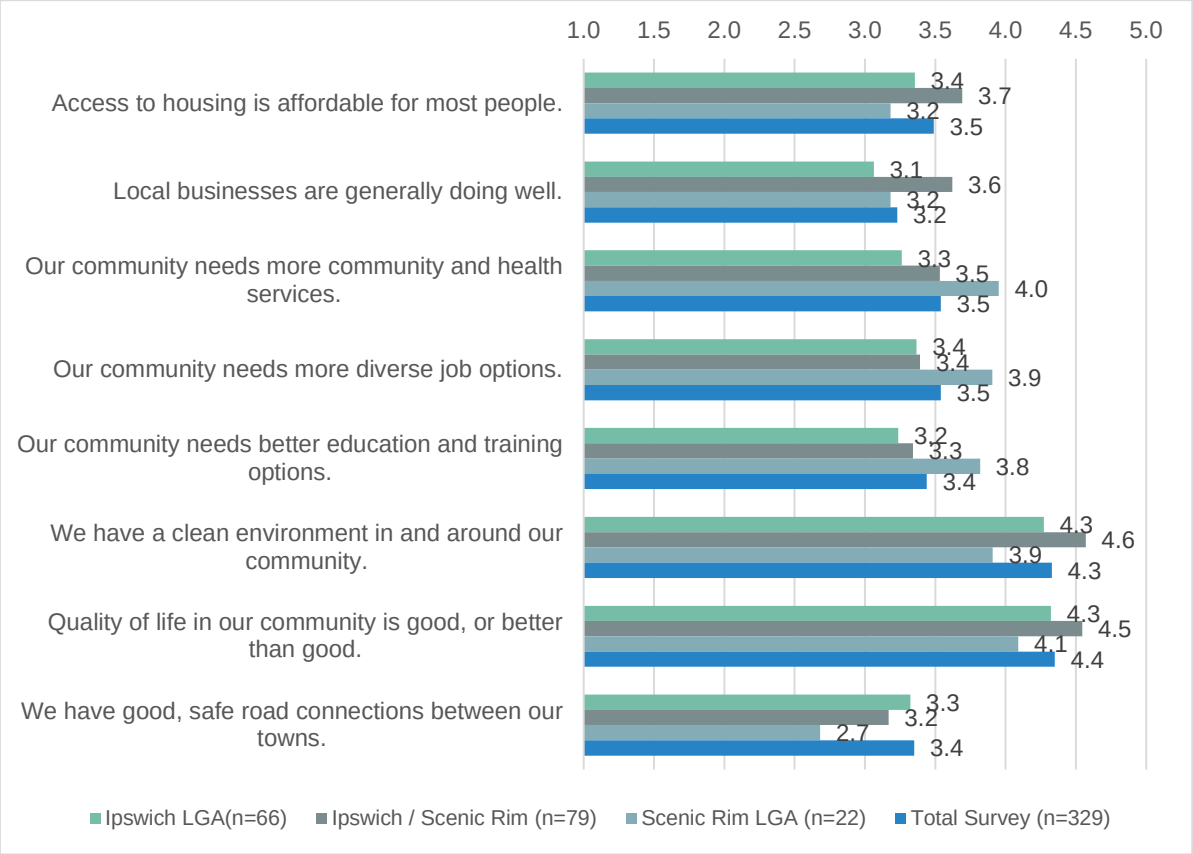


Figure 5-5 : Community wellbeing ratings

5.7.2 Socio-economic factors

Advantage and disadvantage

Research into the social determinants of health consistently establishes that the most disadvantaged people carry the greatest burden of poor health. The Index for Relative Socio-economic Advantage and Disadvantage (IRSAD) is an area-based index that measures both socio-economic advantage and disadvantage in terms of peoples' access to material and social resources, and their ability to participate in society. The indices are ranked so that relativity with other areas can be understood (ABS 2016). As discussed in Section 5.2.7:

- The IRSAD shows Rosewood SA2 among the 30 per cent of most disadvantaged communities in Queensland (Decile 3) while Boonah SA2 is in the lowest 40 per cent (Decile 4)
- Within the EIS investigation corridor, SA1 3128221 south of Rosewood, is the most disadvantaged locality in the SIA study area, and amongst the 20 per cent most disadvantaged communities in Queensland (decile 2). Most other localities are ranked in the mid-range within the 5th decile, indicating they are neither more or less advantaged or disadvantaged (decile 5) with no localities ranked higher than this.

Ageing

Ageing is key determinant of health as the risk of poor health and disability increases with age. Older people living alone have poorer health outcomes health (McKiernan S et al 2005).

Overall there is a higher representation of older people over 65 years in the more rural Scenic Rim LGA (20.2 per cent of the population) than in the more urban Ipswich and Logan LGAs (10.7 per cent and 12 per cent respectively).

The highest representation of older people in the SIA study area is in the State suburbs of Calvert (21.9 per cent of the population), Peak Crossing (20.9 per cent), Ebenezer (19.2 per cent) and Rosewood (18.9 per cent), with more than 1,000 people in this age group in these suburbs.

Disability

People with disabilities face greater challenges across most of the social determinants impacting their health outcomes, including finding work, participating in community activities, accessing housing, health and support services, and are often reliant on a low income.

At around 5.2 per cent of the general population, the level of disability in the SIA study area is consistent with levels in Queensland. This equates to 110 people with a severe disability within the area's main suburbs.[1] As noted in Section 5.2.5, Calvert was the only community where the percentage of people requiring assistance as a result of living with a disability (5.5 per cent) was higher than the State average.

Economic status

There is a strong association between economic status and health, with economic status being a function of access to work, education, housing and income. Specific population groups commonly experiencing low economic status include Indigenous people, young people, seniors, migrants and refugees, people with disabilities and homeless people health (McKiernan et al 2005).

Most of the State suburbs in the SIA study area have a median household income above Queensland's $1,400 per week in 2016. The exceptions are Rosewood and Willowbank, which were well below at $1,110 and $1,198/week respectively.

Entitlement to Pensioner Concession Cards and Seniors Health Cards is a proxy for low socio-economic status, and includes aged pensioners, people with disabilities, carers and sole parents who are in receipt of a pension or benefit. The Boonah and Rosewood SA2s have a higher proportion of residents holding Pensioner Concession Cards than is typical for Queensland (25.5 per cent of the population over 15 years of age, compared with 21.7 per cent). They also have a higher proportion of Seniors Health Care Card Holders (9.1 per cent compared to 7.6 per cent for Queensland) (Torrens University PHIDU 2018. Referencing 2014 data).

The SEIFA IEO is an area-based index that measures and ranks relative advantage or disadvantage for educational attainment or accessing skilled work. The Rosewood and Boonah SA2s are in the 6th and 7th highest deciles (ABS SEIFA Index 2016). However, this is not necessarily well reflected in the employment data, with some significant pockets of unemployment also present.

Unemployment is generally associated with lower income, reduced life opportunities and poorer health and wellbeing. Long-term unemployment and intermittent unemployment can have negative effects on health and wellbeing, especially on the emotional and mental health of unemployed people and their families (Torrens University PHIDU 2018). In 2016, high unemployment was concentrated in the suburbs of Rosewood (11.3 per cent) and Ebenezer (10 per cent) where unemployment rates are significantly above the Queensland rate of 7.8 per cent). Unemployment levels in Willowbank (7 per cent) were similar to Queensland, but much lower in the State suburbs of Peak Crossing, Purga and Calvert (2.7 per cent, 4.6 per cent and 5.8 per cent respectively).

[1] ABS Census 2016 defines people with disability is people needing help or assistance in one or more of the three core activity areas of self-care, mobility and communication, because of a long-term health condition (lasting six months or more), a disability (lasting six months or more), or old age.

The presence of vulnerable groups is an indicator of the level of social disadvantage experienced in the community. The percentage of jobless families with children in the Boonah and Rosewood SA2s is high at 14.2 per cent compared with 12.8 per cent for Queensland. The proportion of jobless families in balance of the SIA study area is lower the Queensland level (Torrens University PHIDU 2018).

Housing stress and homelessness increase the risk of poor health outcomes and reduces psychological wellbeing. The prevalence of severe and persistent mental illness amongst people experiencing homelessness, and people whose housing tenure is marginal, is significantly higher than in the general population (Mental Health Council Australia 2014). Housing stress, housing insecurity and homelessness can be significant barriers for residents accessing education, employment and health services. The Rental Affordability Index is a useful proxy for housing affordability and indicates that housing in the SIA study area is affordable, with households paying 20 to 25 per cent of their household income on rents (SGS EP 2018). Due to the nature of homelessness, the number of people experiencing homelessness is hard to estimate accurately. Estimates of homelessness based on the 2016 Census, indicated there were 92 people who were homeless across the SIA study area's four SA2s, concentrated mainly in Jimboomba and Boonah SA2 (ABS Census of Population and Housing: Estimating homelessness 2016).

5.7.3 Population health and wellbeing

There following indicators provide an overview into the status of the SIA study area's population health and wellbeing.

Self-assessed health

Self-assessed health status provides a proxy measure of health status and relates to how strongly respondents experience illness and disability. The rate of people who assessed their health as being fair or poor in Boonah and Rosewood SA2s was similar to that of Queensland (15.5 people/100) (Torrens University PHIDU 2018).

Developmental vulnerabilities

Developmental vulnerabilities in childhood provide a useful indicator of potential long-term effects on a child's later health, wellbeing and academic success. Boonah and Rosewood SA2s have a higher representation of school age children who are developmentally delayed than is typical for Queensland (18.2 per cent compared with 14 per cent) or elsewhere in the SIA study area (Torrens University PHIDU 2018).

Self-harm and suicide

Death from suicide and self-inflicted injury is an indicator of mental wellbeing, particularly among people between 15 and 24 years of age, and 25 and 34 years of age, for whom suicide is a major cause of death. The Boonah and Rosewood SA2s had slightly lower rates of suicide at 12.0 and 10.1 people/100,000 respectively compared to Queensland's average rate of 14.1/100,000 (Torrens University PHIDU 2018). Further information about mental health is provided in Section 5.7.6.

Circulatory and respiratory diseases

Health indicators relevant to the population at risk of air pollution from fine particulate matter ($PM_{2.5}$ and PM_{10}) include:

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

Available information shows that the SIA study area has a predisposition to a number of these illnesses, with higher rates of hospital admissions for circulatory and respiratory system diseases than the Queensland rate (refer **Table 5-43**).

Table 5-43: Hospital admissions by type 2014-15

Area	Circulatory system diseases, persons	Respiratory system diseases, persons
	Rate per 100,000	Rate per 100,000
Boonah/Rosewood SA2	2,567.2	2,289.8
Jimboomba/Logan Village SA2	2,586.1	2,278.5
Queensland	2,476.9	2,227.5

Source: PHIDU Social Health Atlas 2018. Referencing 2014-15 data. Rates are age standardised

At present, modelled estimates for asthma are only available based on 2012 data. Accordingly, they can only be considered a crude indication of the population likely to be sensitive to air pollution. Estimated rates of asthma in the Boonah and Rosewood SA2s compared with the rate for Queensland (both at 10.5 people/100,000 compared with Queensland's rate of 10.2).

The reported incidence of lung cancer for Boonah and Rosewood SA2s occurs at the rate of 47.7 people/per 100,000 people, lower than the Queensland rate of 51.4/100,000 (referencing 2010 data) (Torrens University PHIDU 2018).

5.7.4 Access to health services

Barriers to accessing services and facilities due to a lack of transport, limited financial resources or feeling unsafe can prevent or delay people accessing medical care, affecting their health and wellbeing.

The SIA study area lies within the wider West Moreton Hospital and Health Service Region. Health services available to the community here are described in Section 5.6.4 and include general practitioners in Ipswich, Willowbank, Rosewood, Boonah, Kalbar and Flagstone, and allied health, hospital and community health services in Ipswich, Boonah, Gatton, Laidley and Beaudesert. Patients requiring more complex treatment are sent to the major acute hospital in Ipswich.

Given the limited public transport services in the SIA study area, most residents, particularly in the Scenic Rim LGA, are reliant on private transport to access health services. This is consistent with the Accessibility/Remoteness Index of Australia's classification of the area as Inner Regional, characterised as having some restricted access to some goods, services and opportunities for social interaction (ABS 2018). Residents in the Boonah, Rosewood and Jimboomba SA2 areas report experiencing more difficulty accessing healthcare services than the Queensland average, estimated at a rate of 2.9 to 3.3 people per 100 people, compared with Queensland's 2.6 (Torrens University PHIDU 2018 (referencing 2014 data). The Home and Community Care (HACC) Program provides services to assist frail older people and younger people with disabilities to continue living in their home and in their communities. State-wide data indicate that nearly 75 per cent of HACC clients are older than 65 years of age and around 74 per cent live in their own home. This is likely to also be the case in the SIA study area, where a quarter to a third lived alone. Given the concentration of older people described earlier, it is likely that many of these clients live in the suburbs of Calvert, Peak Crossing and Ebenezer Rosewood (Torrens University PHIDU 2018).

Overall rates of home and community care assistance in much of the SIA study area were lower than typical for Queensland, with 82.9 instances/1,000 people in Boonah and Rosewood SA2s, compared with 106.3 instances in Queensland (Torrens University PHIDU 2018).

5.7.5 Indigenous health

Indigenous status is an important indicator of health status as Aboriginal and Torres Strait Islander people experience a greater burden of disease and injury than non-Indigenous Queenslanders (Queensland Health 2017). At the 2016 Census, 263 people identified as Indigenous in the SIA study area's main suburbs. The largest population lived in Rosewood (154 people), with smaller populations ranging in size from 12 to 43 people in the balance of suburbs (refer Section 5.2.2).

Unemployment is associated with poorer health and wellbeing. Like many areas in Queensland, unemployment amongst Indigenous residents is high in the SIA study area, but lower than the State-wide unemployment rate of 20.1 per cent for Indigenous people. The level of unemployment in the SIA study area ranges between 16.5 per cent and 19.9 per cent compared with 7.8 per cent for the general population of Queensland.

Indigenous residents in West Moreton Hospital and Health Service Region experienced almost twice the expected burden of disease and injury than the non-Indigenous population in Queensland and have a shorter average life expectancy of 8.3 years. The six most prevalent contributors to the burden of disease were mental disorders (27 per cent of burden), cardiovascular disease (11 per cent of burden), chronic respiratory disease (9 per cent of burden), diabetes, cancers and neo-natal causes. Cardiovascular disease contributed 2.4 years to the gap in life expectancy (Queensland Health 2017).

5.7.6 Mental health

Social infrastructure providers and community members consulted as part of the SIA repeatedly noted the increase in mental health issues and strains on mental health services over the past few years.

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

Estimates for mental and behavioural problems in the SIA study area (defined by PHIDU as including anxiety-related conditions, mood (affective) disorders such as depression, alcohol and drug problems, or problems of psychological development) show that Boonah and Rosewood SA2s have issues at levels similar to Queensland, with 14.4/100 people affected. The rate of hospital admissions for mental health related conditions across the SIA study area is significantly below that for Queensland, which has a rate of admission of 2,162 people/100,000 compared with between 1,727 and 1,830 in the SIA study area (Torrens University PHIDU 2018. Referencing 2014/15 data).

Public mental health services are provided in the SIA study area by West Moreton Hospital and Health Service, delivering specialised assessment, clinical treatment and rehabilitation services. Services focus on people with the most severe forms of mental illness and behavioural disturbances, and work in collaboration with primary health services (including general practitioners, community health workers, nurses, allied health professionals, school health nurses, counsellors and community support groups). An acute mental health unit is based in the Ipswich Hospital. Child and Youth Mental Health Service (CYMHS) are also based in Ipswich, supporting children and young people aged 0 to 17 years who have or are at risk of developing severe and complex mental health issues.

5.7.7 Community safety

Feeling unsafe can influence levels of anxiety and can be a barrier to community participation and accessing services.

The rural and urban fringe communities in Boonah and Greenbank SA2s are estimated to feel more safe to walk alone after dark in the local area than is typical for Queensland (55.9 and 53 people per 100 people respectively, compared with Queensland's 50.9) (PHIDU Social Health Atlas 2018. Referencing 2014 data).

The rate of criminal offences in Boonah SA2 is around 5,400 offences/100,000 people, lower than the Queensland rate of 6,622 offences/100,000. However, Rosewood SA2 has a significantly higher crime rate of 9,155 offences/100,000 people (Queensland Police 2016-17 Annual Report).

Domestic and family violence

Domestic and family violence refers to physical, sexual, economic, psychological, verbal or emotional abuse. It has a significant immediate and longer-term impacts on the health and wellbeing of victims, with exposure leading to poorer physical health overall, and an increased risk of health problems World Health Organisation 2000). The reasons for domestic violence are complex. However, contributing factors include drug and alcohol abuse, irregular or intermittent work, mental health issues (including anxiety), stress and historical trauma (such as disadvantage).

The Queensland Government reports Queensland Magistrates Courts data on applications for Domestic Violence Orders (DVO). In 2017-18, 1,731 DVO applications were lodged in the Ipswich Magistrates Court, while data are not reported for Beaudesert Magistrates Court (Queensland Courts 2018). Of Queensland's 20 Magistrates Courts, the Ipswich Court had the 5th highest level of applications (not adjusted for the catchment population). However, the true scale of the family and domestic violence is likely much greater as only a small proportion of victims report violence (COAG 2016).

Road safety

The SIA study area has a high number of deaths from road traffic injuries compared to the Queensland average. In Boonah and Rosewood SA2s 7.5 people/100,000 die from road traffic injuries, compared with Queensland's 5.4 people/100,000 (Torrens University (PHIDU) 2018, Referencing 2015 data).

Rail safety

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

In the decade from 2001 to 2012 Queensland had the second highest rate of serious rail injuries, averaging 17.1 injuries a year (after Victoria at 58.5 and followed by West Australia at 5.1, with no data reported for NSW). There were 145 road vehicle collisions at level crossings in the decade to June 2012 in Queensland. This equates to a normalised rate 0.4 collisions per million train kilometres travelled per year and was the fourth highest rate in Australia following Tasmania at 3.77, Northern Territory at 0.61 and Victoria at 0.53 (Australian Transport Safety Bureau 2012). In the five years to 2013 there were 6 serious injuries and 8 fatalities from running line and level crossing collisions with people in Queensland, and 67 serious injuries and 8 fatalities from people slipping, tripping or falling (no data are reported for suicide). Most occurred within the greater Brisbane network, with none recorded in the SIA study area (Queensland Government Data, Rail Safety Fatalities and Hospitalisations 2009-2013).

There is over 7,000 km of freight and passenger rail track throughout Queensland (Queensland Government, 2018). The Project would add a further 53 km railway track to this, located generally within the existing SFRC.

6 Stakeholder engagement

This section outlines the process and results of community and stakeholder engagement that has informed the SIA.

6.1 ARTC engagement

As described in EIS Appendix C: Consultation Report, ARTC's consultation approach is critical to the successful delivery of the Inland Rail Program. Between June 2017 and July 2020, consultation activities with Project stakeholders included face to face meetings, community information sessions, quarterly Community Consultative Committee (CCC) meetings, and local, State and federal government briefings.

As described in detail in EIS Appendix C: Consultation Report, the consultation process included monthly Technical Working Groups and fortnightly Design Interface meetings with LCC, ICC and SRRC during the EIS preparation process to develop an understanding of local issues and challenges, provide regular updates on design development and EIS progress, and identify potential Project impacts, benefits and mitigation measures.

Key themes raised throughout the EIS consultation process included:

- Project description
- Traffic, transport and access
- Land use and tenure
- Social impact
- Noise
- Surface water and hydrology
- Flora and fauna
- Vibration
- Environmental management plan.

ARTC's community and stakeholder engagement program and the outcomes of engagement to date are detailed in EIS Appendix C: Consultation Report. Stakeholder inputs of relevance to social impacts raised in ARTC consultation are considered in Sections 6.3 and 8.1.4.

6.2 Social impact assessment engagement

SIA engagement was integrated with ARTC engagement processes for the Project, through:

- SIA team participation in community information sessions to speak with residents, landholders and business owners
- Attendance at CCC meetings, to provide information about the SIA scope, process and impact assessment
- Participation in meetings with Yuggera Ugarapul People.

The results of ARTC consultation with the Scenic Rim CCC, landholders, the Department of Education, Ipswich City Council, Scenic Rim Regional Council and Ipswich and Scenic Rim business chambers have also been considered in the SIA.

The SIA-specific engagement process is shown in **Table 6-1** and included:

- A community survey involving more than 400 residents in the Toowoomba, Lockyer Valley, Ipswich and Scenic Rim LGAs
- Meetings with Ipswich City Council and Scenic Rim Regional Council officers
- Meetings with Yuggera Ugarapul People
- Workshops with community organisations and government agencies
- Participation in community information sessions and CCC meetings
- Meetings with the OCG.

The SIA process also considered the results of ARTC's face to face meetings with directly affected landholders. The results of SIA specific engagement are included in Section 6.3, with stakeholders' identification of mitigation options addressed in Section 8.1.4.

Table 6-1 SIA Engagement

Stakeholder Groups	Engagement Purpose	Mechanism	Timing
Landholders and community members	▪ Provide information about the Project and EIS study process ▪ Enable community members to contribute their views on the scope of potential social impacts and benefits	▪ Participation in ARTC community information sessions (varying number of participants – refer EIS Appendix C: Consultation Report) ▪ Briefing to and discussion with Scenic Rim CCC (approximately 32 members and observers)	Late May-July 2018 May 2018
	▪ Collect information on social baseline values	▪ Community survey (approximately 200 participants from Ipswich and Scenic Rim LGAs) ▪ Participation in ARTC community information session	June-July 2018 September 2018
	▪ Provide detailed information about the Project alignment and obtain community input on potential impacts, benefits and mitigation measures	▪ Discussions with Scenic Rim CCC (approximately 32 members and observers) ▪ Interviews with landholders and community members at ARTC in information sessions – Yamanto and Beaudesert (approximately 10 interviews) ▪ Interviews with landholders and community members at ARTC in information sessions – Beaudesert, Rosewood, Peak Crossing (approximately 20 interviews)	September 2018 November 2018 May 2019

Stakeholder Groups	Engagement Purpose	Mechanism	Timing
Indigenous community	▪ Identify Indigenous community values to be considered in the SIA ▪ Seek inputs on opportunities for Indigenous economic and community development	▪ Meeting with two Yuggera Ugarapul elders as part of community information session ▪ Liworaji Aboriginal Corporation (Indigenous community organisation) participation in social infrastructure providers' workshop ▪ Meeting with Yuggera Ugarapul People	May 2018 October 2018 November 2019
Local Governments – Ipswich LGA and Scenic Rim LGAs	▪ Brief Council and managers on the draft SIA scope and seek their inputs on potential impacts and draft mitigation measures	▪ Meetings with planning, engagement and community development officers (9 officers in total)	October and November 2018
	▪ Provide opportunity for detailed discussion of social impacts and benefits, and feedback on mitigation measures	▪ Workshop with Council staff (7 officers from ICC and SRRC)	July 2019
OCG	▪ Discuss the proposed SIA scope and assessment requirements	▪ Meeting with OCG	June 2018
	▪ Advise the OCG on the results of stakeholder engagement and preliminary assessment findings	▪ Workshops with OCG Government agencies, ICC representatives and SRRC representatives to discuss preliminary findings and mitigation measures	July 2019
Community and Government organisations	▪ Identify social infrastructure capacity and gaps ▪ Seek input on social impacts and opportunities for social infrastructure providers and vulnerable groups ▪ Seek inputs on mitigation measures and enhancement measures	▪ Two workshops (Ipswich and Beaudesert) with social infrastructure providers involving health, community, emergency, disability, and Indigenous services (total of 16 organisations)	October-November 2018
Community and environmental organisations	▪ Seek community organisations views on potential social impacts and mitigation partnerships	▪ Community information sessions (as noted Appendix C: Consultation Report)	October 2018 September 2018

Stakeholder Groups	Engagement Purpose	Mechanism	Timing
Businesses and business organisations	▪ Identify businesses' views on potential impacts and opportunities, and identify strategies to support local suppliers to participate	▪ Meeting with Scenic Rim Chambers of Commerce (five chambers - approximately 15 people) (undertaken by ARTC) ▪ Meeting with consultation with Ipswich Chamber of Commerce two people) (undertaken by ARTC)	June 2019 December 2018
Government Agencies ▪ DSDMIP ▪ DCDSS ▪ DTMR ▪ DESBT ▪ DET ▪ DATSIP ▪ DHPW ▪ Queensland Health ▪ QPS ▪ DITRDC	▪ Seek agency input on the preliminary SIA findings and agencies' specific interests with respect to mitigation strategies	▪ Social Technical Advisory Group meeting coordinated by OCG	July 2019

6.3 Engagement findings

The results of stakeholder engagement undertaken as part of the SIA, and by ARTC as relevant to social impacts and benefits, are presented below.

6.3.1 Community survey

As described in Section 4.3.6, 201 residents in the Project region participated in the SIA survey in June-July 2018 and of the 199 survey respondents who nominated their home address, 79 people were from the Ipswich LGA, 26 people were from the Scenic Rim LGA and 94 people were from communities on the LGA boundary, including 83 people from Peak Crossing. A further 202 people from the Toowoomba and Lockyer Valley LGAs participated in the survey which also addressed Inland Rail's Gowrie to Helidon (G2H) and H2C projects.

Key themes were very similar with respect to the three Inland Rail projects and included consistently high levels of agreement among respondents that they value their communities as family-oriented and safe, and generally with a strong sense of identity. However, lower ratings were consistently provided in relation to their community's capacity to adapt to change. Respondents described strong values attached to local environmental qualities, including landscapes and biodiversity, and a strong appreciation for a rural way of life.

Respondents anticipated more negative than positive effects from the Project. The general tone of survey comments indicates mistrust, anger, fear and opposition to the Project's alignment. Some comments acknowledge the Project's national significance and broad-scale benefit, but many others did not expect Project benefits to be experienced at a local level.

Overall, the survey results showed that respondents anticipated negative effects for their community in relation to:

- Impacts on local property values and on quiet enjoyment of private properties
- Severance of farming land and impacts to agricultural productivity and local business operations
- Impacts on scenic amenity and character
- Disruption of residents' quiet way of life and enjoyment of public spaces and townships, also affecting local visitor appeal
- Community wellbeing, including:
  - Fear of community fragmentation, harming cohesion
  - The potential for potential for increased stress, anxiety and depression among affected landholders and also nearby residents who fear or oppose the Project
  - Noise impacts causing nuisance, affecting sleep and general health and wellbeing
  - Potential for pollution and coal dust to affect the drinking water of nearby residents that rely on rainwater tanks.

The least negative response ratings were recorded in relation to the Project's potential effect on employment and training options, industry and economic development and local businesses however, respondents were generally lukewarm about employment and economic development opportunities.

While a general theme from respondents was opposition to the Project, many had given considerable thought to what actions the Project team could consider to mitigate adverse impacts or maximise Project benefits. Stakeholder inputs to suggested mitigation measures are detailed in Section 8.1.4.

6.3.2 Landholders

ARTC has led ongoing direct communication and engagement with landholders in the Project's study area. ARTC is consulting with all directly affected landholders, and has also consulted landholders near the disturbance footprint and in potentially affected communities as part of CCC meetings, community information sessions, static displays and community forums.

As of 8 June 2020, 536 individual meetings, phone calls and emails had been made with landholders in the Project region. Key issues identified as part of landholder consultation include:

- The potential for construction or operational noise to impact on quality of life, and the availability of mitigation measures to reduce noise exposure
- Opposition to the Paynes Road realignment, and input on road re-alignments of Washpool Road, Paynes Road and Dwyers Road
- Concern about the process of land acquisition, and uncertainty about when acquisitions would occur, leading to anxiety and stress
- The desire for a grade separated crossing at Middle Road
- Concern regarding the potential for the Project to exacerbate flooding
- Concerns for koala habitats and koalas' access across the corridor
- Concerns regarding the location of the crossing loop near Peak Crossing and potential for noise from idling trains to affect the amenity of nearby residents
- The potential for coal dust to settle in water tanks.

Further information regarding issues raised by landholders and ARTC responses to these issues is provided in Appendix C: Consultation Report.

6.3.3 Community Consultative Committee inputs

The Scenic Rim CCC was established in December 2017 and has 13 members, plus the independent Chair, to represent a cross-section of potentially affected communities and provide input and feedback on the Project's design and potential impacts.

Meetings were held in December 2017, February 2018, May 2018, September 2018, November 2018, February 2019, May 2019 September 2019, November 2019, April 2020 and July 2020.

SIA team presentations and discussion with the Scenic Rim CCC were undertaken to inform the community about the SIA process (Peak Crossing, May 2018) and to seek feedback from community representatives on potential impacts (Rosewood September 2018). ARTC also made presentations to the CCC on Inland Rail's Social Performance Program (November 2018) and the social performance program and mitigation measures for social impacts (July 2019).

CCC members raised the following issues of relevance to social impacts:

- The need for timely communication about the Project's horizontal and vertical alignment and design (addressed in EIS Appendix C: Consultation Report)
- Concerns about Project-related stress and anxiety affecting mental health
- How impacts on wellbeing will be monitored
- Impact on Native Title interests or cultural heritage (e.g. severance of landscapes)
- Changes to rural character through effects on visual amenity or cultural heritage places
- Noise and vibration, with specific mention made to the possible future inclusion of trains of 3.6 km and potential for noise barriers to be part of Project
- Concern about the potential impacts of noise on the IRCEC
- Waiting times at level crossings which could cause inconvenience, or delays to emergency vehicles
- Increased traffic and traffic disruptions during construction leading to road safety issues
- Potential for passenger rail inclusion as part of the Project design
- Potential long-term community benefits of reduced freight truck movements on local and state-controlled road networks
- Potential for effects on unregistered bores
- Concerns for the management of biosecurity risks (weed and pest control, and fire ants) by the Project
- Interest in employment opportunities
- Status of the Ebenezer intermodal terminal
- Road safety, in particular the safety of level crossings, and
  - Washpool Road realignment
  - Proposed level crossing on Middle Road
  - Paynes Road realignment
  - Safety of level crossing and a desire for all crossings of public roads to be grade separations

- Request for road closures to be publicly notified
- Involvement of local businesses in the supply chain
- How Indigenous businesses are being engaged to participate
- Ensuring local employment targets specifically address the Project region.

6.3.4 Community information sessions

ARTC has held four rounds of community information sessions to involve directly impacted and nearby landholders, community members, CCC members, community groups and local business stakeholders in discussions about the Project. Information sessions were held as follows:

- Drop in community information sessions at Rosewood, Beaudesert, Purga and Peak Crossing in May-June 2018, to provide a Project update, discuss the EIS scope, promote the SIA community survey, and seek stakeholder feedback
- Drop in community information sessions at Purga, Peak Crossing and Beaudesert in July 2018, to announce the Project and engage with landholders
- Shopping centre displays in Yamanto in November 2018 to provide a project update and an overview of EIS investigations
- Drop in community information sessions at Beaudesert, Rosewood, Purga and Peak Crossing in May 2019.

Themes of particular relevance to the SIA included:

- Impacts of property severance on agricultural uses
- Property acquisition and the land valuation process
- Potential noise impacts on amenity, including near Peak Crossing in relation to the crossing loop, and the potential for cumulative noise impacts in relation to the Ipswich Motorsport Precinct
- The availability of early acquisition processes to avoid hardship
- Potential impacts on traffic safety, particularly with respect to level crossings
- Impacts of road severance/re-alignments on local connectivity
- Concerns about changes to current flooding patterns which would inundate more properties or extend the duration on inundation
- The need for more information to enable community members to understand impacts
- Impacts on rural character and environmental qualities.

EIS Appendix C**:** Consultation Report summarises the key issues raised during the consultation process, and where these issues are addressed in the EIS. Inputs from stakeholders who identified their home locations which have relevance to social impacts are l summarised in **Table 6-2**.

Table 6-2: Community information sessions inputs on potential social impacts and benefits, by area

Community	Issues raised
Calvert and Lanefield	▪ Freight rail noise and vibration ▪ Visual impacts ▪ Less ability to sell property due to noise impact ▪ Concerns about exacerbation of flooding

Community	Issues raised
Willowbank	▪ Lack of information on timing, affecting ability to plan for businesses ▪ Concern that coal dust will affect tank water and solar panels ▪ Exacerbation of current noise impacts from the raceway, planes and mining
Rosewood	▪ Potential to impact on existing flood conditions ▪ Potential for additional travel times/delays ▪ Concern about cumulative noise impacts, particularly near the Ipswich Motorsport Precinct and in relation to RAAF Base Amberley ▪ Concerns around particulates in drinking rainwater tanks ▪ Impacts to visual amenity and eco-tourism ▪ Potential to impact on school bus routes and safety of children ▪ Concerns for mental health and anxiety that the Project has generated
Peak Crossing	▪ The rail alignment's proximity to the Peak Crossing community, with noise as a key concern ▪ Concern about tourism businesses and the effect of road disruptions, impacts on scenic amenity and noise ▪ Impacts of Washpool Road realignment, Middle Road traffic flow and Dwyers Road ▪ Potential to impact on Aboriginal cultural heritage ▪ Impact on peaceful amenity and attractiveness of IRCEC ▪ Impact on rural and natural views ▪ Water contamination from coal dust or other pollutants ▪ Degradation of local roads from construction traffic and traffic safety ▪ Cumulative impacts of train noise and road noise from Ipswich-Boonah Road ▪ Concern about land acquisition impacts on private properties ▪ Strong concern regarding potential for increased flood risk and local impacts ▪ Concern regarding potential impacts to water table supporting farming operations ▪ Potential to impact on koala habitat which would be experienced as a loss of environmental qualities by local residents
Purga/Mutdapilly	▪ Concerns about land acquisition process ▪ Effects on fauna and amenity of Purga Nature Reserve ▪ Impacts on Middle Road as a district connector ▪ Level crossing safety ▪ Concerns about exacerbation of flooding ▪ Concern about exacerbation of existing noise ▪ Concerns around the impact of diesel engines and coal transportation on air quality, and potential for particulate dispersion in rainwater tanks used for drinking ▪ Concern about impact to local properties and interest in land swap arrangements ▪ Impact to community and desire to explore legacy projects that will ensure something positive comes out of the Project ▪ Indigenous cultural heritage values

Community	Issues raised
Washpool	▪ Potential to improve Washpool Road access by providing a sealed road ▪ Effect of dust on solar panels ▪ Effects on property values ▪ Effects on firefighters' access and concern about Project causing fires especially during track maintenance on the tracks ▪ Vibration from trains affecting high set houses and peace and quiet ▪ Potential for new/re-aligned roads to service the community
Mutdapilly	▪ Potential noise and vibration in context with current impacts of mining, raceway, highways, RAAF Base Amberley, Willowbank ▪ Disruption to access via Goebels Road/Mount Forbes Road/Ebenezer ▪ Flooding
Undullah	▪ Severance of access for properties at the end of Wild Pig Creek Road ▪ Impacts on cattle yards ▪ Consideration of maintaining access to properties, including cattle crossings
Kagaru	▪ Effect of Project on cattle yards and therefore property function ▪ Effects on residential property amenity and value
Allenview	▪ Impact on grazing operations including cattle transport ▪ Potential for property severance ▪ Potential to displace families

6.3.5 Council engagement

Scenic Rim Regional Council

Consultation with SRRC officers for the SIA identified baseline values including:

- A strong focus on the future sustainability of the LGA's environment, communities and economy, with the quality of the environment and sustainable employment options central to the region's growth
- The LGA has a strong tourism industry, with scenic amenity and environmental values central to the tourism brand
- The equine community has access to extensive horse trails including through the remote Undullah ranges
- Peak Crossing is experiencing some residential growth with new houses being built
- Major residential developments at Flagstone, Ripley and Yarrabilba will contribute to regional population growth, but need to be supported by local jobs
- There are existing pressures of population growth on the region's road networks
- Analysis for Council indicates that almost 50 per cent of local residents are travelling outside the Scenic Rim to access employment
- NBN connectivity is an issue for the entire region
- Social infrastructure is generally sufficient to meet current community demands, but regional hospitals are small
- Beaudesert High School is the only provider/facilitator of training in the region and the community profile shows a significant gap in the 18-24 year cohort, as school leavers are leaving the region.

Issues raised by SRRC officers included:

- Community concern regarding the Project's effect on property values
- Community concern about Inland Rail's impacts on tourism
- Concerns that any transportation hubs may cause localised traffic impacts
- Existing poor road conditions and potential road safety impacts opportunities for improvement on Ipswich-Boonah Road and Boonah-Beaudesert Road
- Potential to affect viability of transport businesses, turf farms and poultry farms
- Concern for the impacts of constructing the Cunningham Highway crossing on road users (including major goods and service providers such as Woolworths and local quarries), and amenity for nearby residents (one dwelling is located 100 m southeast and one located 400 m southwest of construction area)
- Any temporary growth in accommodation demand may place pressure on affordable housing
- The need to avoid creation of small residential lots out of keeping with other nearby lot sizes
- Ensuring development supports the region's values, including maintaining public and scenic amenity, was identified is an important consideration for the Project.

Potential opportunities identified included:

- Inland Rail's potential to support the growth of jobs at Bromelton
- Support for local employment and indigenous employment
- Training programs that would facilitate access to Project opportunities, involving Beaudesert High School to formalise links pathways
- Potential for Inland Rail to support the LGA's sustainability in the context of transportation and road network management
- Potential supply opportunities for quarries
- Benefits for managing long haul driver safety.

At the technical workshops with Government agencies and Councils in July 2019, Council's inputs included:

- Questions regarding the basis for compensation for property acquisition, including the need for consideration of the value of properties prior to announcement of the Project
- Consideration of the effects of land acquisition on the viability of small farming lots
- The need to consider the effects of roadworks, construction noise and other impacts on the amenity of tourism facilities
- The need for construction planning to consider scenic values which support amenity and tourism
- Concern regarding the effects of roadworks and traffic congestion on daytrip tourism which comprise approximately 80 per cent of the Scenic Rim LGA's tourism trade, with potential for long term impacts on tourism
- Concern regarding the potential for the construction workforce to require accommodation and crowd out tourists, with consequential impacts on a range of local tourism businesses
- The opportunity to align with Council's regional development initiatives, to build businesses' capacity to participate.

Ipswich City Council

Consultation with ICC officers for the SIA identified baseline values including:

- Currently a very high rate of mental health issues in Rosewood
- Existing disadvantage in rural communities
- The need for more diverse and sustainable employment opportunities
- Trauma and anxiety following past floods
- Drought affecting the health and wellbeing of the farming community
- A current Council focus on mental health and Indigenous business development with Aboriginal community partners
- Ebenezer intermodal freight facility as a key opportunity for regional development.

Ensuring adequate representation of community members concerns was a strong priority for Council officers. Key issues raised in relation to the Project included:

- The effects of land severance on the settlement pattern, and in particular the need to avoid creation of additional lots which become small residential blocks in rural areas
- The potential to exacerbate flooding across the Ipswich region is a concern for residents following the 2011 floods
- Confirmation regarding the number of rail movements which would be experienced through towns such as Calvert
- Current difficulties in managing fire hazards within the Purga Nature Reserve
- Severance of north-south connectivity between facilities and homes
- Community concern about impacts of noise and/or dust on amenity
- Concerns with flat topography (e.g. in Calvert) that noise will carry and be heard for some distance
- Potential for construction or operation to impact on the Ipswich Motorsport Precinct at Willowbank.

At the technical workshops with Government agencies and Councils in July 2019, the SIA team presented the SIA's draft findings and an outline of the SIMP and sought Council's inputs. Feedback included:

- The need for the Project's recruitment strategy to focus on residents in the Ipswich LGA
- A large number of new schools are planned to cater for growth in Ipswich's population, and may need to be considered in relation to the Project's potential impacts
- The potential for construction activities to impact on the amenity of the Ipswich Motorsport Precinct, particularly with respect to amenity and traffic access during major events such as CMC Rocks and Touring Car Championship, which attract thousands of people
- The need to consider the effects of roadworks, construction noise and other impacts on the amenity of tourism facilities
- The need for construction planning to consider both scenic values and large tourism events (e.g. noise impacts on events based on appreciation of the environment, and peak accommodation demands)
- Consideration required of whether caravan parks or mobile home parks near Willowbank would be affected
- Existing congestion on Middle Road that would need to be considered in traffic management planning

- Consideration of current planning by ICC, DTMR and Economic Development Queensland for the Ebenezer area
- Existing congestion on Middle Road that would need to be considered in traffic management planning.

6.3.6 Indigenous communities

ARTC has consulted with traditional custodians as part of the Project's cultural heritage assessment process, which involved cultural heritage surveys and consultation with endorsed parties. ARTC is also conducting engagement with Indigenous community members with respect to Indigenous employment and training opportunities. Aboriginal elders are also represented on the CCC.

The SIA team participated in an interview with Yuggera Ugarapul elders at the Grandchester community information sessions May 2018), during which the elders focussed on the importance of landscape features with cultural importance, and opportunities for employment and training for Indigenous young people. An Elder representing the Liworaji Aboriginal Corporation (a community organisation offering community development and training services) who participated in the SIA workshop in Ipswich noted the potential for housing impacts to disproportionately affect Indigenous households, many of whom who have less housing security than the general community.

ARTC met with Yuggera Ugarapul People in August 2019. Key issues included:

- Respect for the cultural landscape
- The need for ongoing consultation with Yuggera Ugarapul People as the detailed design progresses
- Keen interest in employment opportunities and Indigenous business participation in the Project
- The need for Yuggera Ugarapul People (not just Indigenous people generally) to be employed and to have business opportunities as part of the Project
- Barriers to employment will need to be addressed, e.g. job readiness and drivers' licences
- Potential for the Project to support cultural awareness, e.g. cultural appreciation tours.

A meeting with the Yuggera Ugarapul People was held in November 2019 to review the SIA's draft findings and mitigation and enhancement strategies. Key issues raised included:

- Effects of project construction on wildlife corridors
- Changes to the landscape and environmental impacts cause distress to Aboriginal people
- The need for cultural awareness training for workers, in consultation with Yuggera Ugarapul people
- Need for cultural heritage assessment of the locations of any new quarries
- Interest in an opportunity to talk with Indigenous agencies that will be involved in Inland Rail projects
- Employment and business opportunities which could include:
  - Interest in establishing an Indigenous Rangers program to be involved in environmental management and rehabilitation works during and after construction
  - Need for a dual focus on skills training and employment young people and mature jobseekers who can then go onto other construction work
  - Need for advice to Yuggera Ugarapul people regarding business opportunities and skills that contractors require
  - Potential Ipswich City Council and Inland Rail to identify opportunities to support Yuggera Ugarapul people to get skills and work experience prior to Inland Rail construction commencing

- Value of employing an Indigenous mentor for Indigenous personnel
- Yuggera Ugarapul People interest in meeting with the contractor once awarded, and specification of goals for Yuggera Ugarapul People to be involved in Project construction.

6.3.7 Social infrastructure providers

Consultation with social infrastructure providers (community and government organisations) identified the following issues:

- Potential Project impacts on community mental health, related to uncertainty, anxiety about Project impacts and disruption of social support networks
- Limited resources in rural hospitals to cope with increased demand for services, which could strain services if there was a significant population influx or change in community health
- Community tension about the Project location and land acquisition, as the SIA study area attracted people who want a quiet rural lifestyle and they are concerned that the Project will impact on amenity
- Early establishment of relationships with the QFES to discuss potential impacts and mitigation measures with regards to local community safety and traffic safety, demands for service
- Potential for protest activity, which could cause community division and drain Police resources
- Wide load escorts are likely to require considerable Police resources
- Traffic safety issues with Project workforce commuters who aren't familiar with local roads, as even with small increases in traffic an increase in fatigue related incidents/animal strike is noticed locally
- The need for careful management of traffic disruptions, particularly for works to the Cunningham Highway which is an existing ongoing focus for traffic policing and road closures can cause safety issues
- Potential for increased calls for Police, Ambulance and QFES calls for service as the result of traffic accidents
- Need to maintain access for QFES around the disturbance footprint and to nearby communities, which will require ongoing consultation.

6.3.8 Government agencies

Government stakeholders who participated in SIA workshops included representatives of:

- Ipswich Community Health Services Centre
- Rosewood, Laidley, Boonah and Harrisville Police Station
- Grandchester State School
- TAFE Qld
- UQ Gatton Campus.

The OCG coordinated a technical workshop with Government agencies and Councils in July 2019. The participants included representatives of:

- DESBT
- DSDMIP (Regional Development)
- DATSIP
- Queensland Health

- DCDSS
- QPS
- QAS
- QFES
- DITRDC
- ICC
- SRRC.

ARTC also consulted directly with the Department of Education regarding the potential for noise to affect school's learning environments, and the process for ongoing consultation regarding the Department's Learning Environment Policy.

The workshop considered the SIA's draft key findings and proposed outcome for impact mitigation and enhancement of Project benefits. Feedback included:

- Consideration of whether there are DHPW properties in the EIS investigation corridor
- Consideration of impacts on events at the Ipswich Motorsport Precinct and related tourism businesses
- Accommodation plan required for construction workforce to manage potential cumulative impacts on local short-term accommodation providers
- Address the potential impact on existing housing and rents and the consequential impact on lower income earners and potential displacement
- Consider social impacts associated with the Project's water use
- Interest in ARTC's plans for training strategies and partnerships aimed at building capacity for local people to benefit from Project employment opportunities
- The need to consider perceived impacts as well as impacts established as part of the EIS or SIA
- Interest in the likelihood of impacts on health services as the result of workforce demands
- Endorsement of ongoing consultation with the Department of Education regarding the potential for noise impacts on schools
- The importance of ongoing engagement with government agencies during the detailed design and construction processes
- Interest in management strategies used by rail operators to ensure compliance with air and noise criteria
- Support for proposed collaboration with QPS, QFES and QAS.

6.3.9 Businesses

ARTC has undertaken a total of 374 engagement interactions, including 11 meetings, with tourism businesses including the IRCEC and Flinders Peak Winery in the preparation of the EIS. Key issues raised by tourism businesses and groups have included:

- Concerns about noise impacts on tourism facilities during the Project's operation
- Management of impacts on the environment which may affect tourism businesses or tourists' enjoyment of the area
- Concerns about the impacts of roadworks or increased traffic on tourism visitation

- Supplier and contractor opportunities.

Farmers who participated in consultation noted the potential for land acquisition to impact on the productivity of their farms, impacts on farm infrastructure, and impacts on stock crossings and stock routes.

ARTC has also met with the two Councils' economic development teams and with business chambers in the Ipswich and Scenic Rim LGAs.

Key issues raised in ARTC's consultation with the Ipswich Chamber of Commerce and the five Scenic Rim Chambers of Commerce included:

- The Project region's attractiveness for families, with safe communities, strong town cultures and good schools
- Keen interest in employment opportunities being offered to young residents in local communities, particularly with respect to supporting population retention in the Scenic Rim LGA
- Potential for disruption of traffic access to local businesses
- The region's accessibility and increasing popularity for day-trip tourism, with accompanying strong growth in food and accommodation services, and potential to impact on tourism
- Impacts on agricultural properties
- The need to increase access to information technology to encourage young people and businesses to stay, with 70 per cent of the geographic region serviced by satellite rather than the NBN
- Capacity for local businesses to participate in construction, with property development construction recently supporting growth in the sector
- The very large number of owner operator businesses and small businesses, which may have less capacity involvement, but could experience significant benefits from participation in the supply chain
- The prevalence of workers commuting outside the LGA for work
- High traffic loads on major roads, with the Mount Lindesay Highway of particular concern
- Facilitation of industrial development (e.g. Bromelton and surrounding areas).

6.3.10 Summary of issues

Table 6-3 summarises key issues raised by stakeholders of relevance to social impacts and benefits, and the relevant sections of the SIA where issues are considered.

The following issues raised in consultation are not addressed in the SIA:

- Potential for passenger rail inclusion, impacts associated with any transportation hubs and the status of the Ebenezer intermodal terminal, as these are not part of Project scope
- Management of biosecurity risks (as this is addressed in detail in EIS Appendix J: Terrestrial and Aquatic Ecology).

Stakeholders were also encouraged to provide feedback on actions that ARTC could take to mitigate potential impacts or enhance Project opportunities. Stakeholder inputs on mitigation and enhancement measures are addressed in Section 8.1.4.

Table 6-3: Stakeholder issues addressed in the SIA

Issues raised	SIA section
Impacts on Indigenous cultural landscapes/heritage values	7.1.1
Concern about the land acquisition process, compensation for acquisition and impacts of land acquisition on private properties	7.1.2
The impacts of freight rail noise and vibration including cumulative noise impacts	7.1.4
Impacts on rural character and rural amenity	7.1.4, 7.1.7
Potential for construction noise to impact on quality of life	7.1.4
Potential effects of diesel emissions or coal dust on air quality or tank water	7.1.4
Impacts of constructing the Cunningham Highway crossing on road users and amenity for nearby residents	7.1.4
Impacts on property access	7.1.5
Potential for additional travel times/delays or degradation of local roads from construction traffic	7.1.5
Impacts of road re-alignments	7.1.5
Changes to groundwater water quality or availability	7.4.4
Potential for noise impacts on schools	7.1.4
Potential for changes to connectivity to disrupt access between homes and facilities	7.1.6
Impacts on connections between community members	7.1.6
Concerns about road safety in regard to level crossings	7.4.5
Concerns about exacerbation of flooding	7.1.9
Concerns about impacts on property values	7.1.10
Potential to support employment in the Project region, including for local Indigenous people	7.2.1
Potential for partnerships in training opportunities	7.2.3
Potential for impacts on caravan park residents	7.3.3
Potential cumulative impacts on short term accommodation	7.6
Potential impacts on housing rents and consequential impacts on low income households	7.3.3
Potential to delay emergency services at level crossings	7.4.1
Potential for impacts on health due to dust or emissions	7.4.2
Concerns for mental health and anxiety that the Project has generated	7.4.3
Impacts on the amenity of the Purga Nature Reserve	7.4.4
Impacts associated with the Project's water use	7.4.4
Potential for accidents in relation to level crossings	7.4.5
Potential for commuter traffic or large vehicles to impact on traffic safety, including school bus routes	7.4.1, 7.4.5
Impacts on events at Ipswich Motorsport Precinct and related tourism businesses	7.5.2
Firefighting access	7.4.5
Potential to impact on koala habitat, impacting koala health and tourism	7.5.2

Issues raised	SIA section
Positive legacies	7.2.3, 7.5.5
Impacts on tourism businesses, tourist travel and scenic amenity	7.5.2
Impact on farming properties and agricultural businesses, including impacts on farm infrastructure and bores and the viability of small farming lots	7.5.3
Impacts and opportunities for road transport businesses	7.5.1
Impacts on stock and equipment movements	7.5.4
Potential supply opportunities, and the need to enable capacity for local businesses and Indigenous businesses	7.5.5
Demands on local health services	7.4.1
Cooperation with emergency services to mitigate Project risks and the potential for increased calls for service	7.4.1
Disruption of traffic access to businesses	7.5.1
Potential community benefits of reduced freight truck movements on local and State-controlled road networks	7.4.5
Potential to support the growth of jobs at Bromelton or Ebenezer	7.5.6
Opportunity to align with Council's regional development initiatives to build businesses' capacity to participate	8.6

7 Potential impacts

This section describes the potential for social impacts and benefits to occur as a result of the Project during its construction and operation. The potential for cumulative impacts is also discussed. Section 9 provides an evaluation of the risk of Project impacts to social values.

The SIA process identified the potential for impacts in all potentially affected communities identified in Section 4.3, with the likelihood and consequence of impacts varying across communities, generally dependent on their proximity to the disturbance footprint as discussed below. These communities are referred to as 'potentially impacted communities' in the remaining sections of the SIA.

7.1 Communities and stakeholders

This section describes the potential for impacts relating to property acquisition, the potential to exacerbate social disadvantage, effects of construction and/or operation on residential amenity, connectivity (community members' ability to move around the area), community cohesion and sense of place, and the community's capacity to adapt to changes brought about by the Project.

7.1.1 Indigenous interests

Native title and cultural heritage

The Project was designed to utilise the existing gazetted SFRC and where possible is located on predominantly freehold land where Native Title has been extinguished. The Project intersects one land parcel identified as Reserve tenure (Lot 146 on CC3359) which is located within the Yuggera Ugarapul People's claim area and may be subject to Native Title rights.

The *Native Title Act 1993* (Qld) (NT Act) prescribes a statutory process to enable Native Title holders and parties seeking use of land to reach agreements about the use of that land. Where it is determined that Native Title has not been extinguished within the permanent disturbance footprint, ARTC will seek the extinguishment of Native Title rights and interests in question, prior to the compulsory acquisition process, to enable the grant of the necessary interests in Crown Lands required to construct the Project.

Consultation with Yuggera Ugarapul People confirmed that the landscape in the SIA study area is important to cultural heritage and Aboriginal connections to Country. An interview with Yuggera Ugarapul People who attended a community information session identified features that are culturally important as including the Mount Flinders area as a sacred site, a waterhole used for healing, on top of a peak (area not specified), sacred sites around Ebenezer, and the Purga Cemetery. Members of the Yuggera Ugarapul People noted that the imposition of linear infrastructure such as roads and rail infrastructure can affect the ability to connect with landscapes, and the prospect of disturbance to the landscape and environmental qualities causes distress.

In accordance with the ToR and the *Aboriginal Cultural Heritage Act 2003 (Qld)* (ACH Act), Indigenous cultural heritage values and Project impacts to these values will be managed under approved CHMPs.

ARTC has undertaken consultation and negotiation in accordance with Part 7 of the ACH Act with the relevant Aboriginal parties for the Project. ARTC initially developed a CHMP with the Jagera People #2 Aboriginal Party. Subsequently, after this Aboriginal Party was replaced by the Yuggera Ugarapul Aboriginal Party, ARTC developed a CHMP with the Yuggera Ugarapul Party. In the circumstances, ARTC amended the Jagera People #2 CHMP to remove the area of overlap with the Yuggera Ugarapul People CHMP, with Jagera People #2 Aboriginal Party's claimed area, relating primarily to the Inland Rail Kagaru to Acacia Ridge project. Further detail on CHMPs is provided in EIS Chapter 18: Cultural Heritage.

A search of the DATSIP Database undertaken on 13 March 2019 identified 45 reported Aboriginal cultural heritage sites within 1 km of the cultural heritage study area, including artefact scatters, isolated artefacts, landscape features, resource areas and a grinding groove (refer EIS Chapter 18 Cultural Heritage). As detailed in EIS Chapter 23: Draft Outline Environmental Management Plan, construction planning will endeavour to avoid directly impacting on identified sites and items of Indigenous and non-Indigenous heritage significance where practicable. If items/sites cannot be avoided, photographic/archival recording of locations/or structures of heritage significance will occur in accordance with outcomes of any further cultural heritage surveys for the Project. Artefacts will be collected prior to construction in accordance with the CHMPs.

Access to training and employment

Employment opportunities and participation in the business economy are central interests for Traditional Owners and Indigenous community members. Recognition has been given to traditional custodians' interest in employment and business involvement as part of the Inland Rail Indigenous Participation Plan.

The Project will implement Indigenous training partnerships, facilitate employment pathways and work with Indigenous businesses to strengthen their capacity and opportunities for involvement in the Project's supply chain, as discussed in Sections 7.2.1 and 8.3.

7.1.2 Property acquisition

Acquisition process

Consultation with affected landholders and communities has been central to understanding individual property operational arrangements and the potential for project impacts. ARTC is meeting with all affected landholders and those adjacent to the project to identify their specific needs and concerns, and to provide information to assist landholders to identify their options for impact mitigation, management or offset.

The Project was designed to utilise the existing gazetted SFRC where possible, to minimise the extent of 'new' properties to be acquired. Where land is required outside of the gazetted SFRC corridor, the corridor will be amended in consultation with DTMR, which will require acquisition of private properties and roads reserves.

Any additional land required for the project will mostly be acquired through a compulsory land acquisition process, also known as land resumption. The land resumption process will only commence once the Project is approved and all or part of a property is identified as directly affected by the proposed Project works.

Land resumption processes in Queensland are undertaken by acquiring government agencies (described here as the Constructing Authority) in accordance with the *Acquisition of Land Act 1967* (Qld) (AL Act), which sets out the process for acquisition and the assessment of compensation principles.

If land is required only for the construction phase of the project, and not for the ongoing operation of the rail project, land may be occupied temporarily in accordance with the AL Act or may be leased or licenced from landholders.

Land acquisition

The Project's use of land includes land within the rail corridor which is required for the Project's operation, and temporary use of land for construction purposes.

As described in EIS Chapter 8: Land Use and Tenure, of the approximately 754.73 ha required permanently for the rail corridor, approximately 687.98 ha (91.1 per cent) is freehold land, with the remaining lots being Lands Lease, Reserve, a watercourse and other parcels used for public purposes (e.g. road type parcels). The tenure type and the areas/percentages of impact as indicated by the Project's design, are detailed in EIS Appendix G: Impacted Properties.

Temporary use of land for construction purposes would require the use of an additional 222.93 ha, of which 204.93 ha (92.3 per cent) is freehold land. Where possible, construction sites such as laydown areas will be located in the EIS investigation corridor or in QR's existing rail corridor. ARTC will otherwise aim to locate laydown areas on lots which would be acquired due to severance, or by lease or license agreement with other landholders. A detailed description of laydown area locations and land requirements is provided in EIS Chapter 6: Project Description and Chapter 8: Land Use and Tenure.

The land use for seven properties impacted by the permanent footprint is residential with all seven residential properties impacted by a margin of over 65 per cent (refer EIS Appendix G: Impacted Properties).

The predominant land use for the majority of the other land parcels (with exception of parcels such as Reserves and easements) is grazing native vegetation, however some of these properties include homes, and some are also used for horticulture. Further detail regarding properties used for agriculture is provided in Section 7.5.3.

Two volumetric acquisitions of private properties are required for the Teviot Range tunnel, however there are no homes located above the tunnel construction area. Concern regarding the implications of volumetric acquisitions and any Project impacts is being addressed through consultation with the affected landholders and provision of information about the acquisition process and compensation principles.

Impacts on residents

ARTC has met with all directly impacted landholders to discuss the proposed Project design and to identify where properties would be impacted. Landholders within the SFRC were generally aware that their property was in the SFRC and may have anticipated acquisition or relocation as the result of a rail project for some time.

Of the 50 DTMR lots that would be impacted, 31 of these properties are tenanted. These tenants would need to relocate.

Private freehold lots will be acquired by the Constructing Authority, either in full, or in part where feasible and as determined in consultation with affected landholders, considering factors such as land parcel size, the effect of the alignment on the property, land use and the property's operability following construction.

Currently there are no property lots which have been identified as being entirely impacted (i.e. requiring full acquisition) by the permanent disturbance footprint. However, consultation with landholders indicates that 22 of them would like full acquisition totalling 34 lots of land. Three landholders have sold their properties to DTMR during the past twelve months as part of an early acquisition request and have moved to other properties.

Full acquisition of properties is likely to result in the relocation of affected landholders, which will be determined in consultation between the Constructing Authority and affected landholders. Where partial acquisition would occur and the landholder wishes to retain ownership, ARTC has worked with landholders to maintain access to their property and mitigate impacts on its operation e.g. adding a culvert to facilitate movement of cattle.

Together, the removal of 31 tenanted dwellings on DTMR properties and an estimated 22 full acquisitions could lead to the relocation of approximately 53 households from the EIS investigation corridor, and potentially from local communities if they are unable to find a suitable property or chose to move to another area.

Landholders on Washpool Road and Paynes Road, where the proposed alignment deviates from SFRC, were not previously impacted by the rail corridor are displeased with the design change and experiencing stress about potential impacts on them or their properties. Four directly affected landholders in these areas have asked for early acquisition to reduce the stress of uncertainty. A small number of landholders whose land is not directly affected by the corridor have also requested consideration of acquisition due to hardship. ARTC will advise the Constructing Authority of landholders' wishes in relation to early acquisitions. There may also be potential for a small number of land acquisitions to mitigate unacceptable operational noise impacts, however the need for acquisitions has not yet been determined.

For the purpose of estimating impacts on populations and housing, the SIA has assumed that approximately 60 households would need to relocate from the EIS investigation corridor.

Consultation with landholders who would need to relocate indicates that they were experiencing impacts including:

- Stress generated by the need to engage in the acquisition process, the lack of certainty about whether the Project will proceed, including timelines for acquisition, and distress about needing to relocate
- Disruption of households and future plans, with the fear of loss of connections to the local community
- Concern about relocation costs, the possibility of difficulties obtaining mortgages and their future financial security
- Anxiety about the ability to replicate their current lifestyle and circumstances in another area.

The rail alignment has been positioned to align with roads and property boundaries where possible to reduce the severance of land parcels, and reduce potential property impacts particularly in relation to private access, services or farm operational arrangements. Approximately 28 lots across the disturbance footprint would experience property severance (where a severed portion of the land becomes a separate lot or parcel). These landholders are concerned that the Project would impact on their enjoyment of their properties' and/or on its use for farming or lifestyle activities.

Engagement with landholders in and adjacent to the disturbance is being undertaken to hear and address their concerns, and to understand the Project's potential impacts including changes to visual amenity, potential noise impacts, and actions required to mitigate impacts, such as changes to internal access roads, water infrastructure such as dams and bores and fencing. The results of engagement with landholders with respect to property-specific measures will be documented and provided to the Constructing Authority, and to the contractor for consideration in the Construction Environmental Management Plan (CEMP), as relevant.

Compensation process

Landholders will be entitled to claim compensation for the acquisition of land or an interest in land, in accordance with the AL Act.

Compensation is assessed on an individual basis, based on the highest and best use market value of the land that is acquired at the date of resumption. Compensation for disturbance caused by the resumption may also apply, and may include:

- Reasonable legal costs, valuation or other professional fees, and stamp duty
- Costs related to purchase of replacement comparable land
- Costs associated with removal and relocation of assets and infrastructure
- Other reasonable financial costs incurred that are a direct consequence of the resumption of the land.

Where only part of a land parcel is acquired, compensation for the severance of the resumed land and the impact upon the remaining land may also apply.

The assessment of compensation is undertaken by a registered property valuer appointed by the Constructing Authority. Landholders may seek their own valuation advice and the reasonable costs incurred in obtaining valuation advice are able to be reimbursed as part of the compensation claim.

Landholders are entitled to obtain their own professional and independent advice in support of their claim for compensation. If there is a disagreement about the compensation, this can be resolved through negotiation with Constructing Authority via a mediation process, or if necessary, by a court judgement.

Landholders can also apply for an advance payment of compensation which does not affect final settlement of compensation at a later date, or to have the matter heard by the Land Court in order to reach a settlement.

Support for affected residents

ARTC's strategies to reduce the impacts of property acquisition on landholders include:

- Meeting with all directly affected landholders and tenants who would need to relocate as the result of the Project's land acquisitions, to identify their specific needs and concerns, and if required, refer them to services which can support them in the relocation process
- Referral of DTMR tenants (including information sharing as approved by the tenants) to DTMR and DHPW to enable their response to tenants' needs
- Establishment of a partnership with the Darling Downs and West Moreton Primary Health Network (PHN) and the Brisbane South PHN to support mental health services in the Project region and address additional demand resulting from Inland Rail
- Provision of funding for community organisations that can provide community and individual support services to support people with their relocation and adjustment to new circumstances.

7.1.3 Disadvantage

As noted in Section 5.7.2, the SA1s transected by the Project had SEIFA IRSAD scores within the 2nd to 4th deciles, indicating there is potential for socio-economic disadvantage, with the lowest scores in the SA1s south of Rosewood and around Kagaru. Local households and businesses have also been affected by the prolonged drought, which has reduced their financial and emotional resources to cope with change. The Project may affect the amenity and connectivity of properties within and near the disturbance footprint, and there is also potential for property acquisitions to displace households with limited socio-economic resources. These residents include households who are currently renting DTMR-owned dwellings in the EIS investigation corridor, which is likely to require a collaborative response between DTMR and DHPW to ensure appropriate support is provided. ARTC will provide information collected during the EIS consultation process, as approved by the tenants involved, to enable this support to be provided.

This will require a close focus on communicating with residents to identify amenity and connectivity concerns and working with them to mitigate the impacts at the local level.

Some of the potentially impacted communities have higher median ages and demonstrably aging populations. In consultation, ICC noted the location of two mobile home parks in Willowbank where residents may have limited capacity to cope with change. The mobile home parks are more than 3.5 km from the Project area and would not be directly affected, however there is potential for seniors and households with low socio-economic resources to find it more difficult to cope with changes to their environments (such as changes to the road network) or accessing Project information.

ARTC will provide funding to local community organisations to provide community support and development programs which will assist residents in potentially impacted communities prior to and during the construction phase, to build their resilience to change and support the growth of social networks. ARTC is currently providing funding, through partnerships with the Darling Downs and West Moreton PHN and the Brisbane South PHN, to the Richmond Fellowship (based in Ipswich), Lives Lived Well (based in Beaudesert and Beenleigh) and Lifeline's Community Connections program to assist residents to cope with stress, anxiety and support community resilience (refer Section 7.4.3). ARTC will continue consultation with ICC, SRRC and the PHNs regarding the need for any funding to other organisations to address Project-related demands on local services. Any organisations to be funded will be identified through consultation with DCDSS, Darling Downs and West Moreton PHN and the Brisbane South PHN, ICC and SRRC, and/or through an expression of interest process.

There is also a likelihood that farming paddocks and infrastructure will be affected by the Project, with direct impacts on dams, fences, or paddocks, or disruption as a result of cross-corridor movements, which could impact on farm management. ARTC is consulting with landholders and will negotiate agreements which address the loss of land and farming infrastructure which supports farming livelihoods.

The SIA study has a high representation of people with limited educational attainment, so it will also be necessary to ensure that Project communications are accessible, and that information about impacts is communicated in terms that people understand.

At the broader level, a positive impact would arise with construction employment sustaining the income and livelihoods of up to 620 construction workers, some of whom are likely to be drawn from local and regional communities.

7.1.4 Amenity and lifestyle

As described in Section 5.3.4, residential amenity in and near the disturbance footprint is characterised by enjoyment of the outdoors, privacy, a quiet rural environment, and access to local villages and towns. Local lifestyles are based on farming, access to other forms of employment in local towns and cities, appreciation of outdoor activities, and close connections between neighbours.

Residents' concerns about potential impacts on amenity and lifestyle include:

- Construction noise
- Vibration impacts
- Dust
- Construction traffic and roadworks on local roads, with potential for noise and dust impacts
- Loss of privacy whilst construction activities are near homes.

The potential impacts of construction and operation are described below.

Construction noise and vibration

Project construction will include the operation of earth moving machinery, cranes, trucks, placement of ballast and tracks, and the use of sundry plant and equipment noise.

Assessment of construction noise and vibration impacts (Appendix P: Non-operational Noise and Vibration Technical Report) indicates that noise associated with the Project's construction will exceed Project noise criteria for some properties near the disturbance footprint. Earthworks and rail civil works are predicted to have the greatest impact from construction noise, however, EIS Appendix P: Non-operational Noise and Vibration Technical Report notes that other construction stages may have greater overall impact depending on actual timing and duration of each construction stage.

The number of sensitive receptors affected at any one time will vary depending on location of activities and progress of works along the alignment for each stage. In total, using the lower limit of 50 decibels (dB(A)) for standard hours, earthworks (as the activity affecting most homes) would cause noise affecting up to 507 sensitive receptors, whilst rail civil works would affect up to 394 sensitive receptors, at different times. For works undertaken during non-standard hours, a Project noise criterion of 45 dB(A) would apply, which would see up to 781 sensitive receptors affected by earthworks and 723 sensitive receptors affected by rail civil works. EIS Chapter 15: Noise and Vibration provides a detailed assessment of noise and vibration impacts.

Noise exceedances were forecast in areas including:

- The towns of Calvert and Peaks Crossing
- Rural residential areas in Ebenezer, Purga and Peak Crossing
- The rural localities of Lanefield, Lower Mount Walker, Mt Forbes, Washpool, Woolooman, and Undullah.

Construction traffic noise is also predicted to exceed the criteria for sections of six roads including Middle Road, Allan Creek Road, Bromelton House Road, Brookland Road, Undullah Road and Washpool Road.

Accommodation and outdoor areas of the Flinders Peak Winery and the IRCEC may be affected by construction noise, as further discussed in Section 7.5.2. The recommended management and mitigation measures for construction noise impacts are detailed in EIS Appendix P Non-operational Noise and Vibration Technical Report.

Works which will create vibrations (e.g. piling and vibratory rolling) will be undertaken as part of construction. Assessment of potential vibration impacts from construction within the corridor found that, if works causing vibrations was conducted at night, the lower night-time vibration human comfort limit was predicted to be exceeded at the majority of residential receivers adjacent to the Project. Minimum working distances and other mitigation measures have been recommended as part of the EIS (Appendix P Non-operational Noise and Vibration Technical Report) in order to meet the cosmetic/structural damage and human discomfort criteria. Tunnelling also creates vibrations as discussed below.

The EIS Chapter 23: Draft Outline Environmental Management Plan includes detailed measures for mitigation of construction noise and vibration, including the development of a Noise and Vibration Sub-plan to the CEMP which would include:

- Identification of the location of sensitive receptors in proximity to the Project's disturbance footprint
- Specific management measures for activities that could exceed the construction noise and vibration criteria at a sensitive receptor
- Notification process (including who to contact in the event of a complaint) to advise of significant works with potential for noise nuisance or vibration at sensitive receptors
- Noise management measures including controlling noise and vibration at the source, controlling noise and vibration on the source to receptor transmission path, and controlling noise and vibration at the sensitive receptor
- Any other requirements necessary to comply with conditions of approval, subsequent approvals or regulatory requirements.

Regardless of the implementation of detailed management measures, construction noise along with dust (refer below), construction traffic and impacts on visual amenity (as discussed in Section 7.1.7) may impact on the amenity of homes and outdoor areas, and may discourage people from participating in outdoor activities (such as barbecues or sports) whilst areas are affected.

Air quality during construction

Assessment of the potential for dust and/or diesel emissions to affect air quality is detailed in EIS Appendix L: Air Quality Technical Report. The Project goals for air quality are based on protecting health and wellbeing, health and biodiversity of ecosystems and protecting agriculture environmental values.

For the construction of the Project, dust sources will be variable in nature and proximity to sensitive receptors. Particulate matter deposited as total suspended particulates (TSP) or dust has the potential for nuisance impacts if not correctly managed. During the detailed phase of construction planning a Construction and Environment Management Plan (CEMP) will be developed. Recommended mitigation measures to be considered when working near sensitive receptors has been provided in EIS Chapter 23: Draft Outline Environmental Management Plan and include:

- Limit clearing to that required to construct and operate the Project, and where practical, stage clearing, grubbing and construction activities to limit the size of exposed areas
- Implement controls to prevent or minimise dust generation, and stabilise disturbed areas and exposed surfaces as soon as practical
- For stockpiles and material storage areas, provide water spraying or covering
- Establish any required long-term stockpiles in locations with suitable separation from sensitive receptors and not in the path of prevailing winds
- Establish and communicate the protocol for notifying relevant stakeholders when potentially dust generating activities are planned to be carried out, with contact details for queries or complaints, and provide timely, meaningful responses to air quality or dust complaints.

Laydown areas and bridges

Whilst noise from construction works related to track construction would be transitory, impacts relating to laydown areas and bridge construction would last for longer periods.

The Project's construction will require 29 laydown areas located approximately 5 km apart along the Project, used for storage, management and distribution of materials. This includes laydown area delivery points (LADP) in centralised locations which will receive and distribute materials and equipment to other laydown areas. Larger laydown areas may also accommodate site offices or satellite site offices, and access tracks will be required to the laydown and construction areas. Flash butt welding sites (a large shed containing machinery and a hardstand area) would be required at a least one of the larger laydown areas to weld track sections together and will require frequent deliveries of large loads.

Laydown areas have potential to impact on local amenity through increased traffic, noise, increased dust or temporary impacts on scenic character. Small concrete batching plants would also be required at the western tunnel portal and at Undullah Road, however, impacts on amenity of neighbouring properties are not expected in these areas. Cement for the rest of the Project could be delivered from Ipswich.

Residents living on roads from which laydown areas would be accessed would experience increased traffic between the laydown sites and the rail corridor. Both Council and community representatives noted that major roads in the Scenic Rim LGA experience heavy traffic, whilst a number of local roads were noted as in poor condition. The Project's Traffic Management Plan (TMP) will include strategies to ensure that Project-related traffic increases during construction are managed to ensure the safety of motorists using all roads affected by the Project.

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

There is potential for some laydown areas to be left in place for their legacy value to landholders or businesses. This will be determined as part of ongoing engagement with local stakeholders.

The Project requires 27 new bridge structures for which construction will involve earthworks, piling, formwork, cement pouring and track construction which may result in noise impacts for nearby dwellings, facilities or businesses. Vibratory rollers and plant such as piling rigs and hydraulic hammers for bridge construction are also likely to result in perceptible vibration impacts for some sensitive receivers.

Noise, traffic or dust impacts from construction of major structures such as bridges have the potential to impact on residential amenity and outdoor activities for extended periods. The Project's CEMP will include measures which will reduce the impacts of noise, vibrations and traffic disruptions. Where they interact with public roads, bridge construction sites will be subject to traffic management and temporary works restrictions to ensure traffic safety.

Waterway crossings were also of interest in relation to Sandy Creek where residents were concerned about the potential to exacerbate flooding, which is addressed in EIS Chapter 13: Surface Water and Hydrology. A summary of the Project's potential to change flooding patterns is provided in Section 7.1.9.

As detailed in EIS Chapter 23: Draft Outline Environmental Management Plan, the proponent, its contractor and employees and sub-contractors working on the Project will be required to comply with:

- Relevant legislation, with attention to environmental legislation identified in EIS Chapter 3: Project Approvals
- Relevant approvals conditions
- ARTC's environmental policy and EMS
- CEMP.

Notwithstanding, the Project's construction activities have potential to impact on the amenity of rural properties and homes, through noise, dust, increased traffic noise, and/or traffic delays at construction sites. This could affect community members' lifestyles, by discouraging outdoor activities, intruding on the quiet rural atmosphere, and/or through reduced willingness to travel.

The Project will consult with all residents adjacent to and within 250 m of Project works, prior to and during construction, to:

- Identify any specific household concerns (e.g. the presence of children or seniors)
- Provide advance warning of the construction schedule and sequence (e.g. how long specific activities will take), and any disruptions to access or services
- Describe the nature and causes of noise and vibrations
- Advise on how long construction work will be heard or seen for each property
- Provide 24-hour contact details for construction managers.

ARTC's community engagement and social investment programs would pay careful attention to communicating with residents regarding impacts which may affect amenity, lifestyle or other quality of life concerns, and work with them to address these concerns.

ARTC's investments in local communities would need a focus on programs and services designed to strengthen local social networks and cohesion, and ensure the potential benefits from the Project are shared (such as access to jobs and training). This would help potentially impacted communities to adapt to Project-related changes and build their resilience to change.

Tunnel construction

A single-track tunnel (Teviot Range Tunnel) is proposed from approximately Ch 39.9 km to Ch 40.9 km through a ridge on the western side of the Teviot Range. The tunnel would be approximately 1,015 m long and would have a maximum cover of approximately 90 m. The tunnel would be excavated by road header from west to east but may also require blasting to remove rock in some areas.

Portals (openings) will be constructed at each end of the tunnel, requiring earthworks and establishment of laydown areas. At the western end this would include offices, amenities, workshops and store, a tunnel ventilation plant, water treatment plant, spoil stockpile and spoil handling facilities. At the eastern end construction facilities are likely to include an office and amenities, a generator and lighting equipment, an area for staging equipment and spoil transport vehicles, and a laydown area.

The area in which the tunnel would be constructed is mountainous with no human settlement. Assessment of noise and vibration impacts undertaken for the Project (EIS Appendix P: Non-operational Noise and Vibration Technical Report) found that with respect to human comfort, vibration levels resulting from tunnel construction would comply with the lower limit for dwellings during non-standard working hours criterion, and would be well within structural damage limits, ideating that adverse impacts resulting from tunnel construction are unlikely.

With respect to blasting during tunnel construction, the assessment found that the closest sensitive receptor for blasting is approximately 930 m from the outer dimensions of the tunnel, so it is likely that suitable charge sizes will be able to be determined which will avoid noise or vibration impacts on sensitive receptors. The potential for blasting to disturb stock will be explored as part of ongoing consultation with landholders near the tunnel and strategies developed to assist landholders to manage their stock e.g. blasting advice which enable owners to avoid the area during blasting.

Operations

Many landholders living near the Project are concerned about the potential for its operation to affect the amenity of their properties as the result of environmental changes which may include, as relevant to each property and community:

- Locomotive and track noise which may intrude on residential amenity, or outdoor activities
- Dust which may settle on nearby dwellings, water tanks or solar panels
- Potential for diesel emissions, particularly near crossing loops
- The introduction of a freight rail line affecting rural views (discussed in Section 7.1.7).

Noise was the most frequently cited concern. Potential changes to air quality as the result of dust from trains or the rail corridor or changes to visual amenity were also raised.

The following subsections summarise the results of relevant EIS chapters as they relate to amenity.

Railway noise

During operations, noise would result from locomotives and from the track, whilst in some areas train horns would also be used. Where the trail track is on embankment or a bridge, noise may carry longer distances. The potential for noise and air quality impacts on homes near passing loops was also concern for some community members, as trains would be stationary on passing loops for periods of time.

Assessment of operational noise undertaken as part of the Project's EIS (EIS Appendix Q: Operational Noise and Vibration Technical Report) indicates that operational noise from the Project may exceed the applicable noise criteria at some identified sensitive receivers (dwellings). There were no non-residential sensitive receptors, such as schools, hospitals or places of worship identified within the noise assessment study area.

The railway noise levels are below the assessment criteria, and do not trigger investigation of noise mitigation, where sensitive receptors are generally located 400 m or more from the rail alignment. The predicted railway noise levels achieve the assessment criteria at the majority of the sensitive receptors.

At Project opening in the year 2026, there are 59 sensitive receptors where the predicted railway noise levels have triggered the investigation of feasible and reasonable noise mitigation measures. The majority of train movements are expected at the Project opening, however the growth in forecast rail traffic has identified an additional six sensitive receptors that trigger investigation of noise mitigation measures for the design year of 2040 (a total 65 receptors triggering investigation of mitigation). The investigation of noise mitigation was primarily triggered by the night-time operations because the number of trains per hour is greater during the night-time. The noise criteria are also 5 dBA more stringent for the night-time period than the daytime.

The affected dwellings were sole dwelling or clusters of dwellings in rural areas, including Purga, Peak Crossing, Lower Mount Walker, Ebenezer and Woolooman. Feasible and reasonable measures to reduce railway noise impacts are expected to be limited to property controls such as architectural property treatments and upgrades to property fencing.

Without mitigation, rail noise would affect the amenity of homes which have been predicted to be affected by noise exceedances. Based on both the location of the sensitive receptors and the margin by which the noise criteria triggered, EIS Appendix Q: Operational Noise and Vibration Technical Report indicates that the feasible and practicable options for noise management are expected to be limited to:

- Architectural acoustic treatments to the building to control rail noise within the internal environment of the building, and/or
- Upgrades to any existing property boundary fencing to improve screening of rail noise levels.

ARTC will provide specific engagement mechanisms with people whose properties may experience noise impacts, to ensure the potential for impacts on amenity is clearly explained, and where relevant, to obtain residents' inputs to the development of property-specific mitigation strategies which will reduce the likelihood of noise impacts on amenity.

Effective mitigation of noise which could exceed criteria is expected to reduce the potential for impacts on the enjoyment of homes, daily activities or disturb sleep. Some affected residents may feel that there is a disparity between noise which meets criteria, and noise levels or noise types (such as low frequency noise) which are experienced as intrusive, which may cause stress or anger. EIS Appendix Q: Operational Noise and Vibration Technical Report notes that rail noise may be audible outdoors within at least 1 km of the rail alignment. This may be experienced as a distraction from the character of primarily grazing land and rural dwellings near the rail corridor. Sensitivity and adaptation to noise varies between people, and some people may experience rail noise as a long-term loss of amenity.

A discussion of the potential for sleep disturbance is provided in EIS Appendix Q: Operational Noise and Vibration Technical Report and summarised in the SIA at Section 7.4.2.

Air quality

Air quality assessment for the operational phase (EIS Appendix L: Air Quality Technical Report) predicts that cumulative background plus Project air quality pollutants will be below Project goals at sensitive receptors. Investigation into the deposition of emissions at sensitive receptor locations in relation to tank water showed that predicted pollutant water concentrations would also be significantly lower than Australian Drinking Water Guidelines.

The assessment concludes that with implementation of the proposed mitigation measures described in EIS Appendix L: Air Quality Technical Report, the residual impacts will be "not significant" in regard to dust soiling. Further information regarding air quality and health is provided in Section 7.4.2.

7.1.5 Connectivity

Property access

During construction, private access to individual properties may be temporarily disrupted where land is required temporarily for construction purposes, including road re-alignments. Access to all homes would be maintained but may be disrupted for short periods whilst road works interact with driveways and access roads. The number of disruptions to property access will be subject to the Project's detailed design. Gravel roads will be provided during construction where required to maintain access to private properties. Properties for which access can't be maintained would be acquired or their owners compensated for disruptions to access.

The Project would also require closure of some unformed private roads which interface with the EIS investigation corridor, which is likely to impact on connectivity across and between rural properties.

Public and active transport

EIS Appendix U: Traffic Impact Assessment Technical Report provides a detailed profile of transport links in the Project region. This assessment notes that from a high-level review of public transport data, no existing public transport routes will likely be affected by proposed road rail interfaces.

EIS Appendix U: Traffic Impact Assessment Technical Report includes a review of the Queensland Principal Cycle Network Plans (PCNP), which shows core routes that are required to increase cycling amongst the population. It was found that no cycle paths under the PCNP would be affected by proposed road rail interfaces, however cycle routes including sections of Ripley Road and Edward Street in Flinders View, Moffatt Street in Ipswich, Mt Lindesay Highway in Jimboomba, and Redbank Plains Road in Redbank Plains may coincide with construction traffic routes.

EIS Appendix U: Traffic Impact Assessment Technical Report notes that the presence of pedestrian and cycle routes should be considered in the preparation of final construction routes during the design and construction phases of the Project, in agreement with the relevant local council.

School bus routes

Interfaces between school bus routes and the EIS investigation corridor are outlined in **Table 7-1**. An increase in traffic volumes as the result of Project construction traffic could result in disruption to school bus services, and there is also potential for delays to school bus services as the result of level crossing construction and operation.

Table 7-1: School bus routes impacted by construction traffic or level crossings

Services	Impacted roads	Project Interface
S848 AM and PM Grandchester, Laidley State High School	Rosewood Laidley Road	Construction traffic
S187 AM and PM Calvert, Ashwell Area, Ashwell State School and Rosewood State High School	Rosewood Laidley Road	Construction traffic
S175 AM - PM Rosevale, Mt Walker Areas, Rosewood State High School	Rosewood Warrill Road	Road rail crossings
S743 AM and PM Lower Mt Walker Area, Rosewood State High School	Rosewood Warrill Road	Road rail crossings
S646 AM and PM Mt Forbes Area, Rosewood State High School	Mount Forbes Road, Cunningham Highway	Road rail crossings
P1422 AM and PM Service - Purga to Peak Crossing State School	Peak Crossing Churchbank Weir Road	Road rail crossings

Services	Impacted roads	Project Interface
S258 AM and PM Peak Crossing, Purga Area to Bremer State High School	Peak Crossing Churchbank Weir Road	Road rail crossings
IP1701 SWD AM and PM run - Boonah to Ipswich	Ipswich Boonah Road, Cunningham Highway	Road rail crossings
P1241 AM and PM Peak Crossing Area, Peak Crossing State School	Washpool Road	Road rail crossings
IP1502 AM and PM Hatton Vale, Lowood, Fernvale, Ironbark area to Ipswich Special Schools	Moffatt Street, Cunningham Highway	Construction traffic
IP1503 AM Hatton Vale/Marburg Area to Ipswich Special Schools	Cunningham Highway	Construction traffic
P429 AM and PM Gleneagle Area, Gleneagle State School and Beaudesert State High School	Allan Creek Road, Mt Lindesay Highway	Construction traffic

EIS Appendix U: Traffic Impact Assessment Technical Report includes assessment of potential impacts on school bus routes, which indicates that that school bus services were not expected to be substantially impacted from an operational and service reliability perspective as a result of Project-generated traffic during construction, and noted that that the presence of bus routes should be considered in the preparation of the CEMP. EIS Chapter 23: Draft Outline Environmental Management Plan notes the need for consideration to limiting construction traffic on school bus routes during pick-up and set-down times on school days, and alternatively, appropriate school bus infrastructure could be installed.

During the detailed design phase, ARTC will undertake consultation with all relevant bus operators identified through consultation with the Department of Education/DTMR to identify any concerns regarding changes to school bus routes, traffic management or pedestrian safety, and identify any issues which need to be considered as part of the Project's TMP.

During the Project's pre-construction period, ARTC will meet with the Department of Education and all schools in Rosewood and Peak Crossing to:

- Describe the construction schedule and the nature of road-rail interface treatments
- Confirm contacts for Parents and Citizen (P&C) associations and seek a joint meeting with the School Principal and P&C to provide a Project update and explain how construction traffic will be managed
- Confirm all relevant school bus services and contact details for their operators
- Identify any specific considerations (e.g. off-campus activities) which should be considered in the Project's road management plan and TMP
- Confirm Project contact details for the construction period and for discussion of any concerns about the operational period.

Impacts on road travel

Careful consideration has been given to the type of crossing at each of the road/rail interfaces to avoid where possible, or minimise, impacts to the surrounding road network, based on factors including access to properties, potential traffic levels, land use, nearby crossings, adjoining properties and the vertical geometry of the rail alignment.

Public roads which will be directly affected and where disruptions to traffic are likely during construction of crossings include:

- Cunningham Highway
- Rosewood Warrill View Road
- Ipswich Boonah Road
- Ten roads managed by ICC (Waters Road, Hayes Road, Coveney Road, Mount Forbes Road, M Hines Road, Middle Road, Glencairn Road, Castle Hill Lane, Truloff Road and Mount Flinders Road)
- Four roads managed by SRRC (Dwyers Road, five interfaces with Washpool Road, four interfaces with Wild Pig Creek Road, and two interfaces with Undullah Road).

In addition to works for construction of bridges and level crossings (refer below) works which may cause disruptions to travel times as the result of relocation, diversion or realignment include:

- Coveney Road, Castle Hill Lane and Truloff Road in the Ipswich LGA
- Washpool Road and Wild Pig Creek Road in the Scenic Rim LGA.

Minor modifications to Waters Road, Rosewood Warrill View Road, Ipswich Boonah Road and Mt Flinders Road would also be required. Roadworks may result in increased travel times for residents and visitors using these roads.

Some disruption to traffic can be expected during construction as equipment, materials and people are transported to and along the corridor. There would also be an increase in heavy and light vehicle movements on local roads associated with construction.

EIS Chapter 19: Traffic, Transport and Access provides a detailed assessment of traffic impacts, noting that Project related traffic consists of traffic generated by both construction and operational activities, however impacts would primarily be during the construction of the Project. Assessment of traffic impacts indicates that certain sections will generate construction related traffic volumes in excess of 10 per cent of the background traffic during the construction phase, and the Project may potentially cause a minor change in levels of service for some road sections during each year of construction, requiring adequate traffic and road use management strategies and mitigation measures.

There is some potential for degradation of local roads due to construction traffic, which will be monitored and remediated in compliance with the Project's agreements with the relevant Councils.

During operations, increases in travel time will result from level crossing operation (refer below).

Bridges

Where the Project crosses main roads and highways, grade separations (overpass or underpass) have been proposed to ensure the Project will not result in a permanent disruption to traffic. Construction of bridges and level crossings on public roads will require detours and cause delays during the construction period, including for:

- Road over rail bridges at Mount Forbes Road, Cunningham Highway and Undullah Road
- Rail over road bridges at Rosewood Warrill View Road, Ipswich Boonah Road, Waters Road, Mount Flinders Road, Washpool Road, Wild Pig Creek Road and Undullah Road.

The Project would also include construction and operation of a total of 16 bridges over waterways (five of which would also cross roads) including bridges over an Ebenezer Creek tributary, Warrill Creek, Purga Creek and its tributaries, Dugandan Creek, Wild Pig Creek, Woollaman Creek, Western Creek, Bremer River and Teviot Brook, which may result in localised impacts to road and creek access whilst construction is underway.

Traffic delays will be managed in accordance with the Project's TMP and potential noise, dust or other impacts on nearby homes will be managed via the CEMP.

Level crossings

Interruptions to accessibility during both construction and operational phases on roads where level crossings are required. Temporary disruptions to traffic will be caused by construction works, road re-alignments and closures.

Heavy reliance is placed on private motor vehicles in the Project region, particularly in the more rural Scenic Rim LGA, as evidenced by the higher rate of vehicle ownership.

Active level crossings would be provided on:

- Hayes Road, Glencairn Road and Middle Road in the Ipswich LGA
- Dwyers Road, Washpool Road and Wild Pig Creek road (two crossings) in the Scenic Rim LGA.

A passive level crossing will be provided at M Hines Road in the Ipswich LGA.

During operations, level crossings will result in periodic disruptions to traffic. It is estimated that the operation of Inland Rail will involve an annual average of about 33 train services per day in 2026. This is likely to increase to approximately 47 train services per day in 2040.

Level crossings would operate at the frequency required to allow trains to pass. The estimated wait time at a level crossing is approximately two minutes. Trains of 3,600 m may operate in the Inland Rail corridor from 2040, which could result in longer traffic delays.

There is potential for alteration of travel behaviour, either temporary or permanent, as has been considered in the EIS Chapter 19 Traffic, Transport and Access.

The potential to affect emergency services' response times due to construction works or delays at level crossings was a concern for local residents and is discussed in Section 7.4.1.

Spoil transport

The Project's construction will produce spoil from cuts and the tunnel. As part of the detailed design and construction phases, there will be opportunities to optimise the use and placement of spoil material between adjacent Inland Rail projects, however excess spoil which can't be re-used in this Project or adjoining projects will be transported to other sites using the local road network, with the intention to maximise use of the State-controlled road network.

The transport of spoil may increase traffic volumes on key routes with potential to affect levels of service or traffic safety. At this stage it is not possible for an accurate assessment of traffic and transport impacts as the result of spoil transport. This would be undertaken during the detailed design phase, and will consider the potential for impacts on other road users. Further discussion of spoil management is provided in Appendix V: Spoil Management Strategy and Appendix U: Traffic Impact Assessment Technical Report.

7.1.6 Community cohesion

Community cohesion refers to a community's connectedness, and its capacity for social relationships and mutual help. Small communities such as those in the SIA study area rely on community cohesion to generate contributions to social resources (from school tuckshop staff to aged care support) to sustain social networks.

As outlined in Section 7.1.2, with the removal of dwellings from the EIS investigation corridor, a minimum of 60 households may need to relocate. Based on the Ipswich LGA's average of 2.8 people per household (which was higher than the Scenic Rim LGA's average of 2.6 people per household in 2016), approximately 168 people would need to leave the EIS investigation corridor and may also leave potentially impacted communities.

Compared to the population of the Project region as a whole, this would not be a significant loss to community networks. However, at the local level, clusters of properties in the Lanefield, Ebenezer, Purga, Washpool, Peak Crossing, Undullah and Kagaru area would be acquired, which would see severance between neighbours, diminished neighbourhood networks and the potential for community members to be lost from community, sporting and business associations. The Project would also disrupt movements across the rail corridor, which could affect willingness to travel to social activities.

Severance between properties, changes to road networks and displacement of residents is inevitable as a result of the Project and is likely to cause at least short-term damage to community cohesion in rural localities where properties would be acquired. The SIA community survey indicated that local residents were concerned about their communities' capacity to cope with change, so this will require particular attention in ARTC's community engagement and social investment programs. ARTC's investments in local communities will also need to a focus on programs and services which strengthen local social networks and provide opportunities for people to meet and participate in community activities.

The ability of individuals and communities to adapt to change (their resilience) is influenced by a variety of economic, social, information, communication and personal/community competencies (Sherrieb et al 2010). Communities are considered to have good adaptive capacity where economic resources (such as access to education, employment, affordable housing) are distributed fairly, and where strong social relationships, networks and community organisation exist, along with the presence of trust, cooperation and reciprocity (Sherrieb K et al 2010; Ross H et al 2010).

While the communities in the SIA study area generally exhibit these adaptive capacities, consultation identified concerns about local capacity to cope with the variety of changes which may result, e.g. changes to road networks, the need for some residents to relocate, loss of local residents from within the rail corridor, and changes to the noise environment. Community resilience has also been affected by the drought which has caused significant financial and emotional stress to farmers, graziers, businesses and service providers. Mitigation measures will include support for community organisations and community initiatives to strengthen community resilience. To date, this has included ARTC funding through partnerships with the PHNs to support mental health and increase community resilience (refer Section 7.4.3).

7.1.7 Sense of place

Residents of potentially impacted communities described the SIA study area's scenic character as central to its value to them and visitors. This character supports both residents' feelings of wellbeing and connectedness to the area, and a range of tourism experiences and attractions. Factors of value to sense of place in or near the disturbance footprint area which may be affected include:

- Cultural heritage, both Indigenous and non-Indigenous
- Views across farms and bushland
- Homes and agricultural infrastructure
- The road network which is central to nearby communities' ability to access services.

Stakeholder feedback indicates that some residents see the Project as incongruent with rural character as it will sever farming land and natural bush land.

Assessment of the potential for impacts on visual amenity and landscapes is detailed in EIS Appendix I: Landscape and Visual Impact Assessment Technical Report, which found that the Project is not considered likely to result in any significant visual impacts during construction. However, one significant impact on landscape character was identified relating to extensive cut and fill and tunnelling within the forested landscapes south of Flinders Peak.

Notwithstanding, the removal of dwellings and vegetation from within the corridor and the presence of laydown areas, increased traffic., lighting near construction sites and construction noise are likely to affect enjoyment of and connection to local environments.

Management measures included in the Project's Draft Outline Environmental Management Plan (EIS Chapter 23) to minimise impacts on landscapes and visual amenity during construction include:

- Develop a Reinstatement and Rehabilitation Plan as part of the CEMP to minimise disturbance to landscape and visual amenity values during the construction period
- Minimise disturbance to avoid impacts to native vegetation and habitats as far as practicable
- Minimise construction compounds close to sensitive receptors to the greatest extent possible
- Minimise height of all stockpiles to the greatest extent possible to reduce their visual impact
- Temporary treatments (such as hoardings and screens) to site compounds to assist in reducing visual impacts
- Avoid or minimise night works close to residences.

During operations, significant visual impacts were anticipated on views from the Cunningham Highway looking southeast to Flinders Peak, and from Ipswich-Boonah Road looking northeast as the result of elevated bridge structures.

Proposed measures to reduce the visual impact of rail infrastructure as included as part of the Landscape and Visual Impact Assessment (LVIA) (EIS Appendix I: Landscape and Visual Amenity Assessment Technical Report) include:

- Infrastructure should be designed following an integrated design process with regard to landscape character and views as identified in the LVIA, to create a consistent legacy of treatments along the Inland Rail Program alignment
- Bridge design considers appropriate design principles at key viewpoints, including the Cunningham Highway, Ipswich – Boonah Road, Undullah Road and the Bremer River near Rosewood – Warrill View Road
- Minimise the extent to which embankments restrict or affect views from nearby residences, to the greatest extent possible, including through sensitive stabilisation, revegetation or where appropriate, screen planting
- Minimise the extent of cut batters and undertake sensitive urban design to blend them into their landscape setting.

Aboriginal cultural heritage values and impacts were identified in consultation with Traditional Owners and are considered in the CHMPs. Consultation with Yuggera Ugarapul People identified their concerns about the disturbance to the landscape and potential for wildlife to be affected, which would cause stress and may affect their sense of place. ARTC will be conducting further engagement with Yuggera Ugarapul People in respect to training to support Project personnel's cultural awareness, and will assist Yuggera Ugarapul People to review EIS findings of relevance to the specific values they identify e.g. management of impacts on fauna and the landscape.

Historical heritage values and impacts on these values are detailed in EIS Appendix T: Non-Indigenous Heritage Technical Report. Sites within the EIS investigation corridor which reflect the area's non-Indigenous heritage include a creamery and a dairy, stock yards, huts and houses, and the remains of Kagaru Railway Station. The assessment found that impacts on cultural heritage sites with local significance include removal of archaeological remains and buildings, whilst vibration from construction or operation may speed the dilapidation of structures such as huts and yards. The significance of predicted unmitigated impacts was assessed, finding impacts of 'large' significance on a homestead complex, two huts, and two creamery/dairy sites, and impacts of moderate significance on a hut and the Kagaru Railway Station remains. The report recommends avoidance of cultural heritage sites of significance, or if that is not possible, implementation of measures such as archaeological surveying, archival recording and/or relocation of archaeological remains. The significance of impacts on non-Indigenous cultural heritage after implementing mitigation measures was assessed as neutral or slight.

Disturbance or accelerated dilapidation of structures which can be seen or accessed may be experienced as a loss to local landscapes, but this loss is not likely to be experienced as a major detraction to the EIS Investigation Corridor's character.

In combination, changes to road networks, construction noise impacts and impacts on views may affect sense of place, which is strongly related to the peaceful rural and natural environments. Changes to sense of place may commence during pre-construction, with clearing of vegetation for laydown areas, the corridor and access tracks, but will continue during operations where residents' appreciation of rural views will be interrupted by the rail corridor, and periodic noise may affect appreciation of the rural environment.

7.1.8 Demographic change

There is little potential for the Project to result in significant changes to the Project region's demographic characteristics, as:

- Existing local workers will be the focus for recruitment and the number of non-local personnel who may stay temporarily in the Project region is expected to be small (refer Section 7.2.1), so there would be no significant increases to the region's population
- The Project would require a small number of homes to be removed from the EIS investigation corridor (refer Section 7.1.2) with no potential for a significant decrease in the Project region's population
- The demographic characteristics of workers travelling from other LGAs to the Project region for work each day are unlikely to be substantially different from those of the existing population, with the exception that a larger proportion would be male.

At the local level, an estimated 60 households or approximately 168 people would need to relocate as the result of land acquisitions (refer Section 7.1.2). Some of these residents are likely to relocate to within their local communities, minimising the population loss.

There is potential for a positive effect tin that young people and other residents who would otherwise have left the region for work opportunities may be retained. There is also potential for Project employment to support higher levels of labour force participation employment and to contribute to household income levels.

7.1.9 Flooding

The Project crosses the floodplains of Bremer River, Warrill Creek, Purga Creek and Teviot Brook. A wide range of stakeholders have raised concerns about the Project's potential to result in changes to the duration and extent of flooding resulting in impacts on farms, businesses and homes. For some, there is a high degree of anxiety about potential flooding impacts.

The Project has undertaken comprehensive consultation with stakeholders as part of developing and calibrating the flooding model and identifying potential impacts on properties and dwellings. ARTC has also held multiple hydrology workshops with landholders and community members to discuss the hydrology and flood investigation including confirming existing flood conditions and reviewing potential changes in flood conditions.

The potential for the Project to change flood behaviour has been assessed in EIS Chapter 13: Surface Water and Hydrology, which considers potential impacts including changes in peak water levels and associated areas of inundation, changes to flood flow patterns, increased velocities leading to localised scour and erosion, changes to the duration of inundation, and the increased depth of water affecting trafficability of roads and tracks. The assessment included determining potential changes to flood behaviour which could result in changes to flooding patterns for the 1 per cent Australian Exceedance Probability (AEP) peak water levels (floods with a probability of one per cent in any one year). Key findings include:

- In regard to the Bremer River/Western Creek floodplain, the assessment indicates localised changes in peak water levels and potential for isolated occurrences of increases in the time of submergence (the period in which flood waters would affect land), which would not affect areas where there are habitable dwellings, roadways or agricultural land
- In regard to the Warrill Creek floodplain, a localised change in peak water levels could occur on an area of agricultural land, and a few isolated occurrences of increases in the time of submergence may occur, but with no flood sensitive receptors (e.g. dwellings) nearby
- In regard to the Purga Creek system, localised changes in peak water levels and isolated occurrences of increases in the time of submergence could occur on areas removed from habitable dwellings, roadways and agricultural land, and realigning Washpool Road would provide improved flood immunity for more frequent flood events
- In regard to Teviot Brook, impacts may include localised changes in peak water levels in highly vegetated areas with no nearby habitable dwellings or agricultural land affected, and isolated occurrences of increases in the time of submergence that would not impact on any road corridors or flood sensitive receptors
- Assessment of increases in peak velocities (which could lead to scouring or increased erosion) predicted only minor localised changes which would be below the guiding impact criteria, with the exception of areas near the proposed bridge over Sandy Creek and the proposed rail bridge over an unnamed creek adjacent to Washpool Road where the existing velocities exceed 2.5 metres/second.

On this basis, changes to flooding patterns that would cause social impacts such as flooding of homes or businesses, or significant changes to the trafficability of roads, do not appear likely.

7.1.10 Property values and plans

Landholders in and near the disturbance footprint are concerned that property values could be affected by e.g. noise impacts, views to construction sites, or increases in traffic on local roads whilst construction is occurring nearby, or by noise, changes to views or perceived or actual increases in flooding risk when the Project is operational. Some landholders whose land is directly affected are also concerned that property values would be affected by diminishment of carrying capacity or productivity, or disruption to water supplies. The potential for a decrease in property values was a source of considerable anxiety about their financial security.

As discussed in Section 7.1.2, compensation for directly affected landholders may include compensation for the loss of legal interest in land, costs related to purchase of replacement comparable land, removal and relocation of assets and infrastructure and where only part of a land parcel is acquired, compensation for the severance of the resumed land and the impact upon the remaining land may also apply. Compensation agreements will be negotiated between landholders and the Constructing Authority as outlined in Section 7.1.2 and have not been further discussed here.

Research on the relationship between property values and infrastructure indicates that property prices are determined by a combination of the properties' actual utility (i.e. use and amenity) and buyers' perceptions about the environmental impacts of infrastructure (Elliott 2008), with responses to perceptions of risk varying.

Research on the effects of freight rail lines on property values in Australia was not identified. A study undertaken in Cuyahoga County, Ohio (USA) (Simons and Abdellaziz 2004) evaluated the impact of freight railroad tracks on housing markets between 1996 and 1999, using a hedonic price model. The researchers noted that most of the studies they reviewed for the research measured the frequency and level of noise to assess their impact on residents or property values, rather than the effect of proximity to a rail track in terms of distance. Simons and Abdellaziz's findings indicated an average loss in value between $3,800 and $5,800 (5 to 7 per cent) for smaller houses located within 750 feet (approximately 230 m) from a freight railroad track. The applicability of this research to rail noise or to property values in the potentially impacted communities is unknown.

A study examining the effect of traffic noise (including road and rail traffic noise) on property values in areas around the airport in Memphis, Tennessee (Ozdenerol, Huang Javadnejad and Antipova, 2015) noted that two previous studies had found a level of around 55 dBA as the ambient noise level that starts to influence house prices, however Ozdenerol et al's study found that traffic noise levels of 45 dB could affect housing prices in the urban areas surrounding the airport, with properties losing additional value as decibels increased.

A study conducted as part of the Western Sydney Airport EIS (JLL, 2016) analysed the effect that aircraft and airport operations (primarily aircraft noise) may have on property prices for residential and large lot land holdings in Sydney, Adelaide, Brisbane and Melbourne. For residential properties, the study identified a strong relationship between house prices and noise exposure in the house sale price data for Adelaide and Brisbane, with an average negative effect on price of around 7 per cent in Adelaide and 11 per cent in Brisbane. For Sydney and Melbourne, the data was far less strongly correlated and indicated that house pricing was not related to or significantly influenced by aircraft noise. Analysis of impacts of aircraft noise on large lot residential properties suggested that there was no discernible or statistically significant relationship between large lot land holdings exposed to aircraft noise in excess of 20 ANEF and the sale price. Again, the applicability of this research to rail noise or to property values in potentially impacted communities is unknown.

Property values may be affected by a mix of factors related to the Project, including direct impacts on land and infrastructure (which will be addressed through commercial agreements between ARTC and landholders) or other impacts on amenity (e.g. increased traffic or dust during construction, and noise or during operation). Impacts would be differential depending on potential buyers' perceptions about potential impacts as well as the actual impacts (such as rail noise). Values may also be affected by factors which are unrelated to the Project, such as property supply and demand, agricultural commodity prices, or the effects of other projects (such as highway re-alignments).

Landholders' concerns about the Project's potential to change property values are acknowledged, however assessment of the likelihood and magnitude of change is not possible given the individual circumstances of particular properties, other market drivers, the variability of Project impacts, and payment of compensation according to individual agreements with landholders. As such the likelihood and quantum of the Project's impacts on property values cannot be conclusively assessed, however stress and anxiety about the potential for negative impacts on property values will result for some residents near the disturbance footprint.

7.2 Workforce impacts and benefits

This section discusses the Project's likely employment and training benefits, workforce management and the potential for the Project's labour requirements to impact on other stakeholders.

7.2.1 Local employment

Construction employment opportunities

Pre-construction activities are anticipated to require approximately 20 personnel for up to six months, commencing in 2021.

Construction of the Project is expected to require a workforce of up to 620 personnel, with an average of 271 Full Time Equivalent (FTE) personnel across the full construction period. Commencing in 2022, the Project's workforce is expected to build to 175 FTE personnel by week 26, 520 FTE personnel by week 52, and 620 FTE personnel by week 70.

Numbers will then decline to approximately 380 personnel by week 104 and then to approximately 50 personnel by week 178. By week 204, construction will be substantially complete, with a workforce of approximately 40 personnel remaining until construction is complete around week 208.

Construction employment opportunities would include:

- Earth moving and road works
- Skilled trades work including welding, electrical and drainage/plumbing trades
- Bridge construction
- Transport drivers (road and rail)
- Crane, excavator and bulldozer drivers
- Machine operators
- Concreters and pavers
- Trackwork laying
- Tunnel construction staff (e.g. road headers operators, tunnel lining installers, and ventilation specialists)
- Other professionals and technical specialists.

Labour availability in the Project region

There were almost 2,600 registered construction industry businesses in the Project region in 2016-17 ranging across the domestic, commercial and civil construction sectors, supporting the availability of suitably skilled and experienced personnel for Project construction. In 2016 the Project region's labour force included 8,871 people working in the construction industry (1,822 workers in the Scenic Rim LGA and 7,049 workers in the Ipswich LGA) (ABS, 2016a).

At March 2019, the Project region's workforce included 8,504 people who were unemployed (1,154 people in the Scenic Rim LGA and 7,350 people in the Ipswich LGA). By March 2020, this had increased to 10,430 people, including 9,149 Ipswich LGA residents and 1,281 Scenic Rim LGA residents (DESE, 2020). The number of Project region residents receiving Jobseeker or Youth Allowance increased from 13,139 people to 21,350 people between March and July 2020, signalling that June 2020 quarter unemployment data will reveal a large increase in unemployment during the first half of 2020.

The higher than average unemployment rates, coupled with higher than average proportions of the labour force who were in occupations that are relevant to Project construction, indicate the likely availability of construction personnel within the Project region. There is also the likelihood of attracting workers who are under-employed, including people that are working part time when they need or would prefer to work full time, and contracting and casual workers who would prefer permanent work arrangements.

Based on ARTC's experience with the construction of the Inland Rail Parkes to Narromine (P2N) project, a large proportion of the construction workforce are unskilled labourers from the P2N project region who have been equipped (where necessary) through training and on the job experience to work in project construction. Noting that the Project is a greenfield project (unlike P2N) and will require skilled trade workers (such as bridge construction workers and tunnelling crews), the P2N experience indicates that the Project region is likely to be a strong source of employment for both skilled and unskilled personnel.

As a relatively modest requirement, the movement of up to 620 personnel to Project employment in the context of regional supply (refer Section 5.4.1) is not expected to place undue pressure on the local or regional labour market. This is further discussed in EIS Appendix S: Economics Technical Report which notes that based on current labour market trends, and industries and occupations of the local workforce, there may be latent capacity and capability within the Project region and the regional economic catchment (defined in Appendix S: Economics Technical Report as the Greater Brisbane labour market region) to support the construction and operation of the Project, and It is likely that local employment will comprise a portion of the construction workforce.

In drawing from a very large labour pool (including people within the Scenic Rim, Ipswich, Brisbane, Beaudesert, Logan, and Toowoomba LGAs), the Project is not likely to have significant difficulties accessing adequate labour for construction or operation. As the construction workforce is expected to be drawn primarily from communities within the Project region and nearby LGAs, employment benefits would extend to construction industry workers across the region. The availability of long periods of employment in Project construction is likely to be a strong positive opportunity for those personnel and their families. There is however potential for cumulative project demands on the labour pool, as further discussed in Section 7.6.

Skills shortages

Skills shortages in specific trades may be exacerbated by Project construction, particularly in the context of cumulative demands for construction labour as discussed in Section 7.6. Relevant industry clusters for which data are collected for Queensland include structural steel and welding trades workers, where there were no shortages detected, civil engineering professionals, where there were widespread shortages, and construction project managers, where the level of vacancies filled was currently at its lowest level in eight years (Department of Employment, Skills Small and Family Business, 2019) (DESSFB).

DESSFB identified construction trades shortages (focussing on trades such as carpenters and joiners which are more relevant to commercial and domestic construction) finding that employers in Queensland had more difficulty recruiting for construction trades in 2018 compared with the previous year. Overall, the proportion of vacancies filled fell from 66 per cent in 2017 to 49 per cent in 2018, and employers in regional areas of Queensland had greater difficulty recruiting for construction trades compared with employers in Brisbane (*Ibid*).

ARTC is working with CSQ to identify potential shortages in trades and professions that will be required for construction of the Project and other projects in the Inland Rail program. This will inform the development of Inland Rail training and development programs, which are described in Sections 7.2.3 and 8.3.

ARTC is cooperating with DITRDC to develop program-wide training and development programs to equip Project region residents for construction and operational employment. ARTC will also promote the availability of operational employment opportunities to residents in the Project region, with a specific focus on encouraging young people and Indigenous people to participate in skills development programs and apply for Project-related employment.

This will include working with training partners to identify local people including young people and Indigenous people who are interested in Project employment, and collaboration to develop training programs which will equip local people for employment in the operation of the Project.

ARTC commitments to local and Indigenous employment include:

- Working with local communities (including Indigenous communities) to strengthen the capacity of the local workforce to participate in Inland Rail
- Requiring the contractor and operators to seek local workers for the Project
- Having a clear and efficient process for people to seek information about employment opportunities and register their interest in Inland Rail
- Providing a workplace that is inclusive and values the contributions of Aboriginal and Torres Strait Islander employees.

These commitments will be extended to contractor as part of contractual requirements.

Indigenous employment

As described in Section 5.2.2, the Project region's Indigenous population had higher percentages of young people, lower percentages of people with non-school qualifications, and higher unemployment rates in 2016. Consultation with Indigenous stakeholders identified a strong focus on employment opportunities. Inland Rail has a focus on optimising Indigenous employment in its projects. In the Project region, initiatives identified include:

- Consultation between Yuggera Ugarapul People, Jagera Daran People, ARTC and other stakeholders such as CSQ and local Councils to identify potential opportunities for early skilling programs for Indigenous workers
- Consultation with DATSIP and training providers regarding training and employment programs which are culturally appropriate and targeted to Indigenous people
- A meeting between Yuggera Ugarapul People representatives and the ARTC to discuss targeted initiatives such as training and mentorship for Indigenous workers
- Communication between ARTC and Traditional Owner groups regarding the range of business opportunities which will be available during construction, the availability of Indigenous businesses to participate and the types of capacity building programs that Indigenous businesses may need to prepare for involvement in the Project supply chain.

Operation

Once operational, a workforce of approximately 20 personnel is expected for the Project's operation. Occupational groups required will include:

- Maintenance staff, including for the track, associated infrastructure, and maintenance of the tunnel ventilation and safety system

- Signallers
- Environmental monitoring and management of land and infrastructure in the railway corridor.

. This is likely to include a mix of:

- Local personnel (e.g. for maintenance of access tracks and/or environmental management)
- Mobile crews moving between sections of Inland Rail (e.g. for major track and ballast maintenance), some of whom may be from the Project region
- Personnel based in operations centres (e.g. signallers).

The Project will also facilitate third party employment of train drivers.

7.2.2 Workforce management

Construction personnel will be working in close proximity to homes and businesses, on 12-hour daily shifts. Worker activity may contribute to noise impacts where work is proceeding close to homes and may also cause concerns regarding safety or privacy.

ARTC will employ the following strategies to reduce concerns and the potential for any impacts on community safety or residential privacy:

- Enforcing a Code of Conduct containing requirements for positive behaviours and respect for local residents and businesses will apply to all contractor and Project personnel
- Ensuring that the contractor has appropriate work conduct policies and procedures, and complaints mechanisms which ensure fast and effective resolution to any issues experienced.

7.2.3 Training and development opportunities

The Project's construction phase represents an important source of potential training and career pathway development for young people in the Project region.

ARTC has a strong commitment to training local and Indigenous people. Training pathways and creation of opportunities for the development of skilled local and Indigenous workers through the Project's construction and operation will be achieved by working with:

- Schools and local training providers, to provide appropriate training
- Aboriginal community networks, to encourage applications and increase the number of Indigenous people applying for jobs
- Key partners, to link training and development programs with other projects and local industries to provide the greatest regional benefit
- Queensland and Australian Governments, to provide long term outcomes through training, mentoring and other support programs.

ARTC is also establishing the Inland Rail Skills Academy which is a collection of projects and partnerships with the aim to:

- Increase the number of skilled local people eligible for employment on Inland Rail and associated regional industries
- Increase school student awareness and capability by connecting students with industry best practice
- Create opportunities for local businesses to participate in new supply chains
- Equip Inland Rail employees with world-class skills.

The Inland Rail Skills Academy comprises four pillars:

- Education: science, technology, engineering and maths (STEM) and trades education in schools and university scholarships into Inland Rail related professions, e.g. engineering, project management
- Skills and training: young people and other residents undertaking apprenticeships and traineeships and gaining industry accreditation to support employment into Inland Rail projects as well as other major regional industries
- Business capacity building: for small-to-medium enterprises to understand and meet major projects' supply chain requirements and enhance the value proposition of local chambers of commerce and business groups
- Inland Rail staff training and inductions: opportunities for staff to increase skills in a range of areas including safety and sustainability.

The partnerships and projects which make up the Academy are in progress, with aims to commence some activities in late 2019 and a more comprehensive program in 2020.

ARTC's workforce development project, training partnerships and the Inland Rail Skills Academy will help to ensure that young people and Indigenous people in the Project region have the opportunity for skills training which will equip them for the construction industry and will be transferrable to future major projects. It will also result in an increase in the skilled labour force in the Project region, leaving a positive legacy for the Project region.

As many social impacts and opportunities associated with Inland Rail will emanate from construction activities, procurement processes and construction contracts will contain outcomes relating to social performance. The contractor will join the Inland Rail Skills Academy and utilise the Academy's programs to support meeting its commitments. ARTC will work with contractor and other stakeholders including training providers to ensure the Project achieves employment of local residents (refer Section 8.2.9).

7.2.4 Impacts on employment in other industries

The Project is likely to acquire or sever farms and may also impact on farms' routes to markets. If this affects their productivity or profits, the availability of employment on farms may be affected. This can't be quantified, however most farms within the EIS investigation corridor are managed by their owners with use of casual labour when required, so there is potential for some effect on the availability of casual farming or harvest work. Impacts on agricultural operations are further discussed in Sections 7.5.3 and 7.5.4.

Impacts on the amenity of tourism attractions may impact their visitation and trading levels (as discussed in Section 7.5.2) with potential for impacts on their capacity to offer employment. Impacts on larger tourism facilities which result in flow-on benefits such as partnerships or mutually supportive supply arrangements with other businesses may also have impacts on other businesses' trade or employment levels, however this is affected by a multitude of variables (such as individual businesses' current trading levels and plans) and can't be quantified. There is potential for Project personnel to patronise local cafes, service stations and general stores which may offset impacts.

EIS Chapter 17: Economics provides the results of economic impact assessment undertaken for the Project.

The economic impact assessment estimates that the Project is expected to provide a total of $155.28 million in incremental benefits to the Project region (at a 7 per cent discount rate), which consists of:

- $118.60 million in freight benefits (including freight time travel savings, operating cost savings, and improved reliability and availability)

- $36.68 million in community benefits (including crash reduction, road decongestion benefits, and reductions in environmental externalities i.e. air pollution and greenhouse gas emissions).

The assessment indicates that labour market conditions during the construction phase of C2K will be somewhere between those characterised by the "slack" labour market (where there are sufficient unemployed and under-employed workers to accommodate the increase in demand for labour without increasing real wages) and a "tight" labour market (where wages are bid up to attract currently employed workers to the businesses contracted to construct the Project). With respect to total employment created, in the slack labour market scenario, it is estimated that an additional 1,400 direct and indirect jobs are generated in the Greater Brisbane region. With tight labour markets, the increase in jobs is estimated to be significantly less at 174 jobs (refer EIS Chapter 17: Economics for more detail).

Noting that several concurrent and overlapping construction projects have the potential to contribute to cumulative economic impacts alongside those of the Project, the economic impact assessment assumes, based on the industry employment and occupation of the local workforce, that the local labour market has the capacity to supply a significant portion of the workforce requirements of the Project, without major disruption to other industries.

7.3 Housing and accommodation

This section describes the Project's potential to constrain the settlement pattern of the local towns or the Project region, affect property values, or affect access to housing and accommodation.

7.3.1 Settlement pattern

There are no direct interfaces between the EIS investigation corridor and towns or urban centres which would affect their settlement pattern. Proposed future growth of the Rosewood area under the Regional Plan will be concentrated to the northeast of Rosewood towards Walloon and Thagoona, and does not appear likely to be constrained by the Project (e.g. through noise impacts). The Flagstone PDA is located to the north of the Project, north of Kagaru. The disturbance footprint does not traverse the Greater Flagstone PDA.

The Project, during construction and operation, would intersect large-lot rural residential areas in the southwest part of Rosewood, through Lanefield, the southern part of Purga, east of the Peak Crossing township and in the Washpool locality. Lanefield is identified by the SEQ Regional Plan as a future urban growth area.

The Project traverses multiple residential and rural lots, the majority of which were identified as part of the SFRC gazetted by the Queensland Government under the TI Act in 2010. This has affected the settlement pattern in the SIA study area by acquiring (or advising of the intention to acquire) properties, and displacing residential uses in favour of rail transport uses.

As noted in Section 7.1.2, private properties will be acquired including some within and some outside the existing designated SFRC. The Project will create a corridor within which other development would be prevented for the life of the Project.

ICC was concerned to avoid the creation of new residential lots in rural areas, attracting low income households, as the result of property acquisition for the Project. ARTC will not seek to register new vacant residential lots as part of the Project, and will communicate ICC's concern to the Constructing Authority.

In intersecting the Ebenezer RIA, the Project has potential to stimulate the RIA's development and increase employment generation in the Ebenezer area. This may support planned residential expansion in the nearest residential growth areas at Flagstone and Rosewood.

The Flagstone PDA is located to the north of the Project, north of Kagaru. The Project is not expected to constrain the growth of nearby growth areas such as Flagstone or the Ripley Valley. The Project may indirectly catalyse local population growth and housing demand by facilitating development of the Ebenezer and Bromelton Industrial Areas., and conversely, may stimulate employment growth and therefore demand for housing in these areas.

ARTC will communicate with ICC and SRRC about EIS results of relevance to rail operations (e.g. noise impacts and road network operation) to support their consideration of any development control measures required to protect the amenity and liveability of residents in areas which are planned for future urban growth.

7.3.2 Access to housing and accommodation

Housing demands due to property acquisition

Approximately 60 households are estimated to need to relocate from in or near the EIS investigation corridor as the result of land acquisitions for the Project, resulting in population loss at the local (neighbourhood) level. There may be some temporary increases in housing demand as people relocate from within the EIS investigation corridor, however this is likely to be dispersed across the Project region and is unlikely to cause a discernible impact on housing access or costs. In the context of a combined Project region population of more than 200,000 people, and with significant residential development occurring in areas such as Flagstone and Ripley, changes to regional housing access are likely to be negligible.

Workforce demand for housing

ARTC aims to maximise opportunities for workers in the Project region to access Project employment.

Project construction would require a workforce of up to 620 personnel. With significant workforce strengths in the construction industry and a potential pool of approximately 8,504 people who were unemployed in March 2019 (refer Section 5.4), the Project region's labour force is well positioned to supply the construction phase. The Project will also have access to a large workforce with relevant skills and experience within the Greater Brisbane region.

On this basis, the Project expects that construction personnel will largely be drawn from communities in the Project region and nearby LGAs and will return home at night. A significant demand for rental accommodation for Project construction personnel is therefore not anticipated, and a workforce accommodation facility is not proposed. ARTC will require the contractor to provide an Accommodation Management Plan (AMP) as detailed in Section 8.4.

As at December 2019, there were 275 rental dwellings available in Ipswich's central suburbs (postcode 4305), 119 rental dwellings in the Willowbank, Peak Crossing, Purga, Washpool area (postcode 4306) and 82 dwellings in the Beaudesert area (postcode 4825). Small pools of rental housing were available in the Calvert, Lanefield, Rosewood, Lower Mount Walker, Ebenezer area (postcode 4340) and in the Boonah and surrounding localities area (postcode 4310) with 17 dwellings each. This represented a total of approximately 510 rental dwellings in the localities and urban centres closest to the Project. The small number of Project personnel who may choose to rent homes in the Project region during the construction phase is not expected to impact on housing availability. For example, if 20 personnel moved to the Project region and required housing, and required one dwelling each (as opposed to sharing housing with other workers), this would equate to a demand for 3.9 per cent of the rental housing available in these areas, whilst the requirement for 50 dwellings would require approximately 9.8 per cent of the rental dwellings. In the context of increasing supply in the Ripley Valley area, this is unlikely to cause an increase in rental costs or displace low income households.

There is potential for cumulative labour force demands to result from the construction of multiple projects in the Project region and other parts of South East Queensland, which may require the Project to source labour from beyond a daily commuting distance, resulting in a need for accommodation for personnel. In the context of the limited availability of rental housing in local communities (refer Section 5.5.3), significant cumulative demands could impact on the availability of affordable housing, as further discussed in Section 7.6.

With an estimated requirement for approximately 20 personnel during operations, some of whom may be drawn from surrounding communities, no significant population change or housing demand is expected as a result of the Project's operational workforce.

Indigenous people's housing access

Data presented in Section 5.5.1 indicate that Indigenous households in the Project region have less housing security due to low incomes, higher rates of rental tenure and higher rates of overcrowding. Any impacts on rental housing availability are likely to have disproportionate impacts on Indigenous people.

As noted in Section 7.1.2, approximately 54 households who are renting DTMR-owned properties within the disturbance footprint would need to relocate. There is potential for these DTMR tenants to include Indigenous families. ARTC's strategies to reduce the impacts of property acquisition on landholders are provided in Section 7.1.2 and include communicating displaced households' specific needs and concerns to the Constructing Authority, and referral to services which can support them in the relocation process.

Affordable housing and accommodation

The Project would require removal of DTMR-owned dwellings in the SFRC. Some of the tenants are likely to require assistance to find alternative housing. ARTC will provide information identified as part of the consultation process to the Constructing Authority (as approved by the tenants involved) regarding any support needs identified.

ICC representatives raised the possibility that residents of affordable accommodation (caravan parks and an over 50s village) in the Willowbank area could be impacted by the Project. The Palm Meadows Home Village, Willowbank Caravan Park and Amberley Caravan Park are located more than 3 km north of the Project, with no potential for direct impacts or noise impacts.

The caravan parks and over 50s village accommodate people with low incomes, for whom affordable housing and access to support networks within the facility are crucial. Any Project demand for accommodation within caravan parks is likely to displace low income households. ARTC will advise the contractor that use of caravan park accommodation within the Project region should not be considered as part of its AMP.

7.3.3 Short term accommodation

The Project may result in occasional demands for short term accommodation (i.e. hotels, motels, short stay units, caravans or cabins) during the construction phase. The contractor's AMP will preclude use of caravans and cabins in the Project region to avoid the potential to displace low income households.

As the majority of the construction workforce is expected to be drawn from Project region, adjacent LGAs and the greater Brisbane region, the number of personnel requiring accommodation is expected to be small, e.g. specialist crews, or small groups of engineering and project management personnel.

Should a demand for short term accommodation occur, it would most likely be experienced in Ipswich, Boonah or Beaudesert, but may also be met in the adjacent Brisbane or Logan LGAs.

As described in Section 5.5.5, the availability of short term accommodation in the Project region is limited. Using the most recently available average occupancy rate for Ipswich city centre tourism accommodation as an indicator, the average availability of motel and short stay unit accommodation in the Ipswich LGA would currently be in the order approximately 95 to 102 beds available rooms) (ABS, 2016e), and in the Scenic Rim LGA, may be less than 20 rooms.

Demand from Project personnel would be a benefit to accommodation establishment owners. However, if the Project were to require large numbers of hotel/motel rooms, this may compete with tourism demands. For example, if the Project required an average of 50 rooms per night to accommodate non-local workers, this may equate to almost half the available supply indicated as available in June 2016, with potential to displace tourists.

Tourists numbers fluctuate in response to marketing campaigns (local and in other regions), seasonal attractions (with generally higher numbers in winter in the Project region), climatic events (e.g. flooding, drought), bushfires and consumer spending trends, among other factors. Large events (such as those held at the Ipswich Motorsport Precinct) make demands on tourism accommodation throughout the year.

As part of developing the AMP, the contractor will need to consult with the Scenic Rim Tourism Association and the Ipswich Tourism Operators Network to identify baseline accommodation occupancy at the time construction is planned to commence, including periods of high tourism occupancy related to community events or seasonal changes. This will enable monitoring and if necessary, management of any workforce use of tourism accommodation, to avoid displacement of tourists and events visitors.

The Willowbank Motel is located approximately 3.5 km from the disturbance footprint, and could be attractive to any construction personnel seeking short term accommodation, however it is used regularly by visitors to the Ipswich Motorsports Precinct. AMP will include a requirement for the contractor to consult with the Willowbank Motel to identify their event-related visitation and how any workforce use of the motel could be managed to avoid displacement of event visitors.

There is potential for construction noise to affect the amenity of short-term tourist accommodation provided at IRCEC and Flinders Peak Winery (refer Section 7.5.2). Assessment of operational noise impacts did not identify noise exceedances at short-term accommodation facilities during operation (refer EIS Appendix Q: Operational Noise and Vibration Technical Report).

For the operational phase, the majority of workers would also return home at night, with a small number potentially accommodated locally (e.g. drivers on fatigue breaks). As such impacts on the supply of short-term accommodation are not expected during operation.

7.4 Health and wellbeing

Community health and wellbeing are shaped by a complex interplay of personal, social, economic, and environmental influences. A safe environment, adequate income, meaningful social roles, secure housing, higher levels of education and social support are all associated with better health. This section examines the impacts of the Project on aspects which influence health and wellbeing.

7.4.1 Social infrastructure access

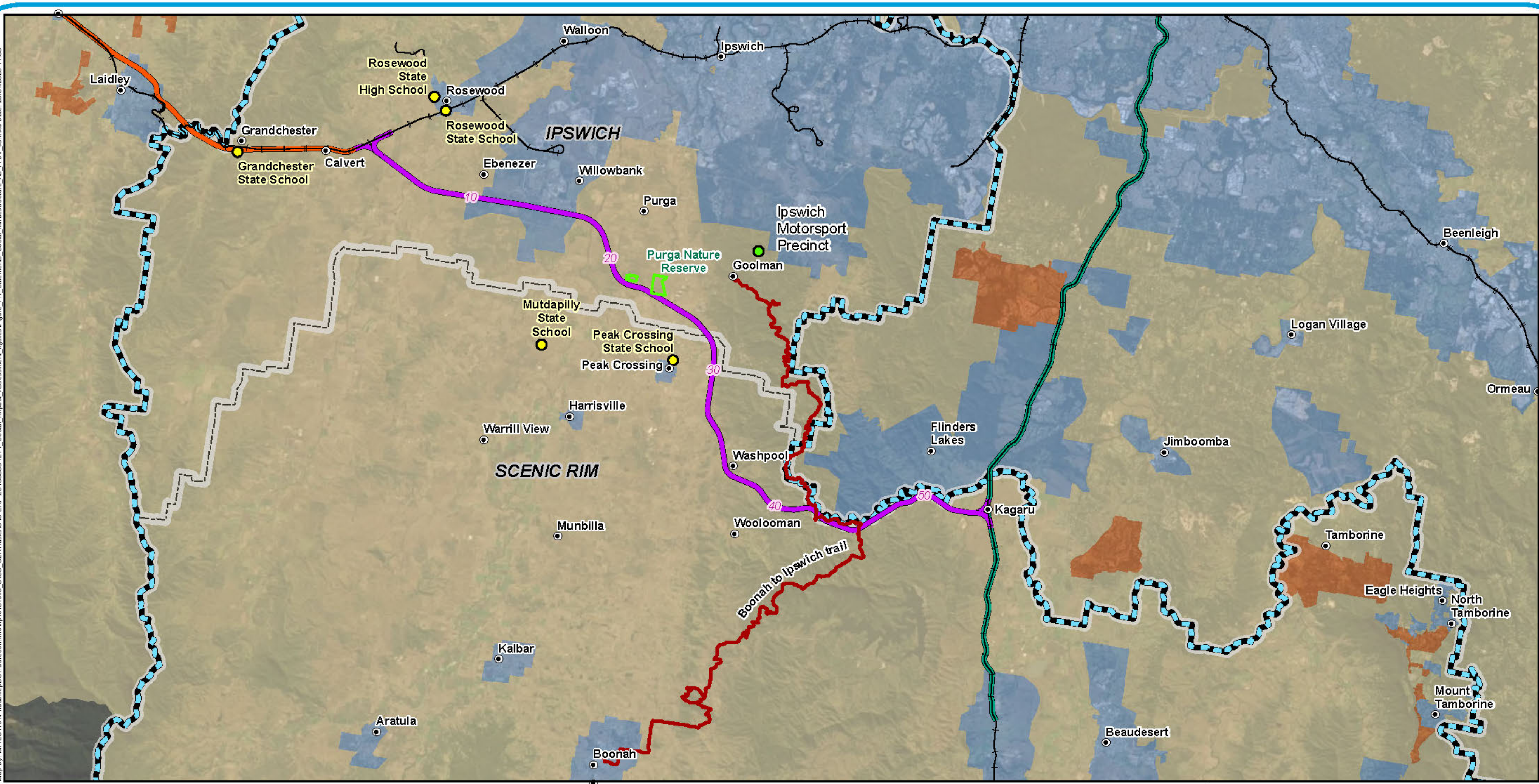
Community services and facilities have a vital function in supporting the health, education, cultural and other social development needs of communities, and in helping the development of friendship and support networks. This section describes the potential for Project demands or changes to road networks to change local access to social infrastructure. Figure 7-1 shows the location of key facilities near the Project's alignment.

The main urban centres providing education, health, civic and recreational facilities to residents in the EIS investigation corridor are Ipswich, Rosewood and Boonah. Other smaller centres providing State Schools and/or community halls to the west of the Project include Peak Crossing, Mutdapilly and Roadvale. As the majority of the Project's construction workforce is expected to be drawn from the local labour pool, the Project is not expected to generate increased demands on existing education and childcare services.

No schools, childcare or community centres are directly impacted by proximity to the disturbance footprint. The shortest distances between the Project and local schools and childcare centres are approximately 2.4 km (east) of the Peak Crossing State School and Goodstart Early Learning Centre at Peak Crossing, and 4.4 km south-west of the Rosewood State School, near the junction with the existing West Moreton rail line (refer Figure 7.1). However, residents may experience disruption in accessing services during both the construction and operational phases of the Project, as discussed below. The need for support services (such as counselling and family support) may also increase during the construction phase in response to Project-related stresses and changes in living arrangements.

The importance of ongoing engagement with government agencies during the detailed design and construction processes was identified in consultation and is further discussed in Section 8.5. In addition to the mental health and community connections programs that ARTC is currently supporting (refer Section 7.4.3), the Project will engage with community organisations as part of its Community Donations and Sponsorship programs, to supplement responses to local community needs.

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

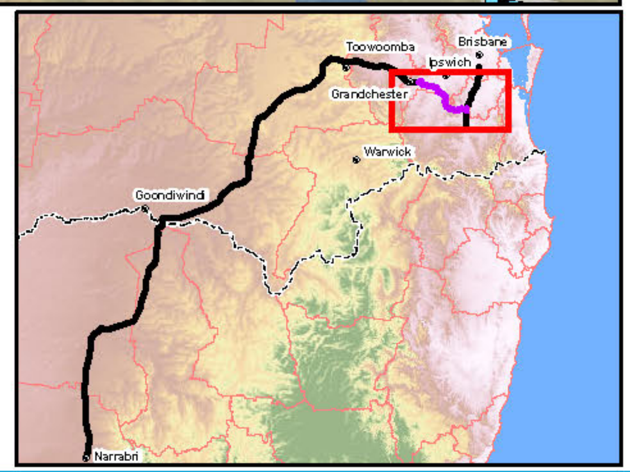


Legend

- 5 Chainage (km)
- Localities
- School (selected schools only)
- Boonah to Ipswich Trail
- Existing rail
- H2C project alignment
- C2K project alignment
- K2ARB project alignment
- Purga nature reserve
- SIA study area
- Local Government Areas

Regional land use categories

- Regional Landscape and Rural Production Area
- Rural Living Area
- Urban Footprint



A3 scale: 1:250,000

0 2 4 6 8 10km

Future Freight
Integrating Community, Environment and Engineering

Issue date: 20/01/2020 Version: 3
Coordinate System: GDA 1994 MGA Zone 56

Calvert to Kagaru

Figure 7.1: Settlements, land use and selected social infrastructure

Construction

Local roads which would be closed during the construction period (and remain closed during operations) include Brass Road and Lubes Road in Rosewood, and Lincoln Lane and Castle Hill Lane in Peak Crossing. This will cause small increases in travel times for residents travelling to services, facilities and schools in Rosewood, Peak Crossing, Boonah and Ipswich. Temporary delays are also likely on roads where grade-separated road-rail interfaces (refer Section 7.1.5) and level crossings (refer below) are being constructed.

Temporary disruptions to school access routes and school bus routes may occur during construction, as detailed in Section 7.1.5. No other impacts of construction activities on community facilities are anticipated.

The Project may use Rosewood-Laidley Road (which becomes Lanefield Road) and Ipswich Rosewood Road (which becomes Rosewood Warrill Road) as routes for construction traffic. Rosewood State High School is located on Lanefield Road, and Rosewood State School is bordered by Rosewood Warrill Road, raising concerns about road safety and pedestrian safety for school students.

ARTC met with the Rosewood State School and Rosewood State High School Principals on 21 August 2020 to discuss traffic safety issues. The Principals noted:

- Road limits around the schools are 40 km and trucks should travel at or below this limit past the schools
- The majority of high school students travel by bus and adding construction traffic to the State High School access road may require provision of traffic controllers
- A preference for trucks to avoid schools' peak drop-off and pick-up times (8:00 am to 8:45 am and 2:30 pm to 3:30 pm)
- Both schools have air conditioning in the classrooms in the event that noise or dust required them to close the windows, with the State School located very close to the road and of timber construction
- Concerns about the potential for construction traffic to impact on the Rosewood town centre including John St which has substantial local traffic including motorised scooters
- Agreement that ongoing consultation with the schools will be required as the Project nears construction.

ARTC noted these concerns which will be considered in development of the TMP. When construction traffic routes are confirmed (during the detailed design stage), ARTC will consult further with the Rosewood State School, Rosewood State High School and the Department of Education to confirm mitigation measures such as avoiding or minimising construction traffic, provision of traffic controllers near schools, speed restrictions, avoidance of peak school traffic periods, and actions and accountabilities with respect to the safety of school bus routes, for inclusion in the TMP.

Community and family support services may experience increased demands prior to and during construction, to assist people to cope with Project-related stress and/or disruptions to households' circumstances for those who would need to relocate. Community members are also likely to seek social support through community networks such as those supported by local halls and community centres.

Whilst consultation participants did not identify specific deficits in community support services, the capacity of services changes over time in response to community demands and Government funding priorities. In addition to the mental health partnership described in Section 7.4.3, ARTC will consult with DCDSS prior to construction commencing, and annually during construction, to identify any Project-related stresses on local services, and if stresses on services are identified, enable a cooperative response to community needs between DCDSS, ARTC and community organisations. ARTC has also made donations and sponsorships available to community organisations in potentially impacted communities, to enable them to strengthen the provision of community programs.

Operation

The operational workforce will be small and also drawn in part from the regional labour pool, so no significant increase in demand for childcare or school enrolment places is anticipated.

Project operation is not expected to generate direct negative impacts on community facility or school sites. However, disruption to school access routes, travel times and school bus scheduling is anticipated as the result of traffic delays at level crossings. Roads used by local communities to access schools and community facilities in Rosewood, Peak Crossing and regional centres which may experience delays at level crossings include:

- M Hines Road
- Purga School Road
- Middle Road
- Shepherd Road (Truloff Road)
- Dwyers Road.

ARTC will renew contact with schools in Peak Crossing and Rosewood prior to operations commencing, to identify any concerns regarding travel delays, and any strategies which could feasibly be applied to reduce inconvenience or other impacts of traffic delays at level crossings.

Health and emergency services

Construction

The workforce of up to 620 personnel may generate an increase in demand for health and ambulance services. It is likely that, for the most part, this would involve minor injuries and illness attended to by local GPs and health services, and that most of workers' healthcare needs would be taken care of by their local doctors or allied health service providers. Personnel requiring emergency treatment would be sent to the Ipswich Hospital (a major acute hospital providing all major health specialties to the West Moreton region), or the Beaudesert Hospital that services the Scenic Rim LGA and offers 24-hour emergency services.

Communication is required prior to the construction phase to ensure Queensland Health services are aware of the construction program and workforce ramp up to enable planning for any minor upgrades to services which may be required. Employment of paramedic staff at major work sites (such as laydown areas and bridge construction sites) would also reduce minor demands on local services.

The main emergency service bases in the SIA study area (accommodating police, ambulance and fire stations) are in Rosewood, Harrisville, Boonah, Kalbar, Jimboomba, Beaudesert and Yamanto. Rural Fire Brigade Stations are also based at Flinders Peak, Warrill View, Roadvale and Ripley Valley. Large scale emergencies within the SIA study area would be serviced from Ipswich.

The construction phase may see a redistribution of the 'daytime' population in and around potentially impacted communities, leading to an increase in demand for traffic policing and wide load escorts on roads used to access Project construction works. Stakeholders identified the potential for traffic safety issues related to Project personnel who aren't familiar with local roads, the potential for an increase in fatigue related incidents, and the potential for increased Police, Ambulance and QFES calls for service as the result of traffic accidents.

Accessibility for emergency services could be impeded during construction at crossing construction sites and when encountering heavy haulage and large load vehicles on roads. This is a matter of significant concern for community members, especially seniors. Firefighting access around the disturbance footprint will also require ongoing consultation with the QFES and Rural Fire Brigades in potentially impacted communities.

Measures to reduce the impacts of Project construction on traffic safety and emergency services include:

- Early advice to providers about pre-construction works, the construction schedule, the number and nature of vehicles and plant to be used, construction hours and construction personnel numbers
- Provision of a forward schedule for Project activities requiring oversized vehicle escorts to police in all emergency services bases
- Early engagement with Police and emergency services to develop co-operative mechanisms and protocols for emergency responses and firefighting access
- Ongoing, regular co-operation with police and emergency services providers to plan for the operational phase.

Operation

The operational workforce will not create any significant population increase and is therefore unlikely to create any additional demand for emergency or health services.

However, any increased risk of road/rail accidents may create significant additional demand on health and emergency services (including Police, Ambulance and Rural Fire Services). Responses to any derailments, level crossing accidents, load loss, hazardous goods spill or other major incident would place a significant demand on police and emergency resources.

Accessibility and response times for emergency services may be impeded when the railway is operational due to route alterations and the likelihood of encountering passing trains at level crossings. Assuming only one level crossing is encountered enroute, the estimated traffic delay would be approximately two minutes. In an emergency, delays to emergency services can have serious consequences. For example, delays of just three minutes can halve the chance of survivability for patient in cardiac arrest (Wiltshire 2015).

The impact of travel delays may alter the following current ambulance response times in the region for West Moreton and Metro South Queensland Ambulance Service:

- Emergency (Code 1 potentially life threatening event) - 50 per cent of responses are achieved in 9.3 minutes
- Urgent (Code 2A requiring undelayed response) - 50 per cent of responses are achieved in 15.4 in West Moreton and 17.2 minutes in Metro South (Queensland Health 2016).

Arrangements between ARTC and emergency service providers, defining appropriate and co-ordinated responses and communication in the event of accidents and other emergencies, would assist the efficacy and efficiency of emergency service responses.

Consultation with Police indicates that the Project's construction will result in substantial increased demand for policing services including traffic policing and site safety in regard to major construction sites such as bridges. Traffic control assistance is likely to be associated with construction sites, laydown areas, heavy haulage vehicles and escorting oversize vehicles or loads, placing increased demands on Police service loads, traffic policing in regard to the commuting workforce, and the potential for community protests in regard to the Project.

The possible increase in traffic accidents associated with workforce commuter traffic (particularly if experiencing fatigue after a 12-hour shift), and heavy haulage and construction vehicles, may increase demand on ambulance and police services (refer to the traffic safety section).

Planned social infrastructure

Future community facilities proposed in the Greater Flagstone PDA fall within 1 km of the Project. The Flagstone PDA is a major new urban development area in Logan City, located immediately to the north of the Project at Kagaru. When fully developed, it will accommodate up to 120,000 people.

The EIS investigation corridor is approximately 1 km from the PDA in Precinct 1 (Flinders Precinct), near areas designated on the approved Land Use Plan as suburban residential uses, district sports/recreation park and the Flinders Town Centre (district centre), including a local community centre.[2] The residential neighbourhoods that fall within this area are intended as low-density neighbourhoods, north and south of Undullah Road. The SEQ Regional Plan anticipates the future SFRC and allows for a greenspace buffer from the rail alignment of around 500 m between the railway and nearby residential and town centre land uses. The local community centre is proposed to be located within the town centre, approximately 1 km from the Project at Ch 51.2 km. This location is indicative only at this stage, with the final location possibly subject to change[3].

It is unlikely that the Project will impact significantly on the future community centre, in either the construction or operational phases. Residents in the areas closer to the Project may experience some noise from the EIS investigation corridor.

Users of the open space corridor in the vicinity of Ch 51.2 km, where the Project is within approximately 200 m from the corridor, may also experience some noise and potentially impacts on the visual character of the open space.

Utilities

As detailed in EIS (Chapter 8: Land Use and Tenure) the Project potentially impacts on a total of 183 known utilities located within the disturbance footprint, comprising of 64 electricity, 114 communications, one water utility, two private groundwater bores, one private recycled water utility and one oil pipeline. During construction, surrounding residences and businesses may experience temporary disruption to services from time to time as these services are relocated or upgraded. Once operational, the Project will not impact on services and utilities within the area.

Consultation has commenced with the various utility providers regarding their requirements for relocation or protection of the services impacted by the Project. With respect to service disruptions during construction, procedures will be developed and implemented to minimise the potential for service interruptions. Affected businesses and residences will be notified in advance of any planned interruptions.

7.4.2 Physical health and environmental qualities

Construction

Residents living near the disturbance footprint are concerned about the potential for increased dust as the result of construction works and/or Project vehicles travelling on unsealed roads. Residents have raised concerns about the potential impact of dust settling on roofs, outdoor areas, solar panels and in water tanks during construction.

As noted in Section 7.1.4, referencing EIS Appendix L: Air Quality Technical Report, dust has the potential for nuisance impacts if not correctly managed, however no potential health impacts were predicted.

[2] Refer approved Precinct 1, Land Use Plan Version 10.5, 2017. Development Approval number DEV2017/844. Accessed at: http://edqdad.dsdip.qld.gov.au/documents/912/11055/844ApprovedLandUsePlan.PDF

[3] Refer Economic Development Queensland, Fig 9 Local Government Community Facilities Map. Accessed 14/9/18 at https://www.dsdmip.qld.gov.au/resources/map/pda/greater-flagstone-local-government-community-facilities-map.pdf

Assessment of the potential for construction noise or vibration levels that would disturb human comfort (EIS Appendix P: Non-operational Noise and Vibration Technical Report) indicates that, as noted in Section 7.1.4, there is potential for construction noise to affect areas near the Project. Construction noise or vibration may affect enjoyment of daytime activities, or cause sleep disturbance (especially for people such as children and shift-workers who sleep during the day). Construction works are generally planned and implemented to maintain daily patterns of activity, and to minimise sleep disturbance at night.

The number of people who could be affected by noise which affects sleep would depend on the proximity of sensitive receptors to construction works, the duration of works in any one location, and individuals' sensitivity to noise. EIS Chapter 23: Draft Outline Environmental Management Plan includes detailed measures for mitigation of construction noise and vibration, including:

- Identification of the location of sensitive receptors in proximity to the Project's disturbance footprint
- Noise management measures including controlling noise and vibration at the source, controlling noise and vibration on the source to receptor transmission path, and controlling noise and vibration at the sensitive receptor
- Specific management measures for activities that could exceed the construction noise and vibration criteria at a sensitive receptor.

Operation

Noise

Rail noise, including locomotive engine noise, wheel squeal and brake squeal, was raised as a key concern by residents and businesses living near the disturbance footprint, some of whom were concerned about the potential for sleep disturbance.

EIS Appendix Q: Operational Noise and Vibration Technical Report references guidance on sleep disturbance from the World Health Organisation (WHO). The WHO guideline Night Noise Guidelines for Europe recommend that internal (indoor) noise levels are not above LAmax 42 dBA to preserve sleep quality. The WHO guideline level corresponds to a conservative external (outdoor) level of LAmax 49 dBA.

EIS Appendix Q: Operational Noise and Vibration Technical Report identified the location of 38 sensitive receptors where the predicted noise levels were above the LAmax noise assessment criteria within the night-time period. EIS Appendix Q: Operational Noise and Vibration Technical Report indicates that the feasible and practicable options for noise management include architectural acoustic treatments to the building to control rail noise within the internal environment of the building, and/or upgrades to any existing property boundary fencing to improve screening of rail noise levels.

The Project will undertake engagement with people whose properties may experience noise exceedances, to ensure the potential for impacts on amenity is clearly explained, and where relevant, to obtain residents' inputs to the development of property-specific mitigation strategies which will reduce the likelihood of impacts on amenity.

The noise predictions identified that noise management criteria would be generally achieved where receptors were further than 400 m from the rail corridor, however railway noise has the potential to be audible at dwellings, both externally and internally, even where the noise management criteria are achieved. Based on the noise modelling, operational railway noise levels could be above LAmax 49 dBA within approximately 1 km from the rail corridor, within which distance night-time noise levels may have the potential to result in sleep disturbance.

ARTC will establish consultative arrangements that are accessible to all residents within 1 km of the Project alignment, including a complaints resolution procedure. If complaints about rail noise indicate that a particular section of the rail line or a specific freight rail service is contributing to unacceptable noise, ARTC will investigate and implement measures which address the cause of the concern.

Air quality

Community members have raised concerns about the potential for diesel emissions, coal dust from rail transport of coal and other particulates from the Project to affect their health.

Diesel emissions contain concentrations of particulate matter, generally measured and reported as $PM_{2.5}$ and PM_{10}. $PM_{2.5}$ are fine particles associated with harmful health effects, including cardiopulmonary and respiratory disease, and have been declared as carcinogenic by the World Health Organisation (NSW Environmental Protection Authority 2018). Overall, there is limited research on concentrations of and human exposure to $PM_{2.5}$ (fine particle) emissions from diesel trains (Jaffe et al 2015). Studies have reported that emissions from diesel trains are a potential health hazard, though they may only be significant for rail yards and enclosed rail stations (Jaffe et al 2015; Rail Safety Standards Board 2016; van Essen 2008).

There is also limited Australian research on links between coal dust from trains and health impacts to residents along the alignment. A Queensland investigation into PM_{10} and $PM_{2.5}$ particle levels along SEQ's Western and Metropolitan Rail Systems evaluated the effectiveness of a coal wagon veneering trial. It found little difference in particle level variations associated with different trains during both the pre- and post-veneering monitoring periods, suggesting that coal dust was not likely to be a significant pollutant. Based on these findings, the Queensland Department of Health concluded that the dust concentrations measured were unlikely to result in any additional adverse health effects (Department of Science Information Technology and Infrastructure 2014).

By contrast, an article on environmental justice and health by researchers from the University of NSW and others describes 'environmental injustice in the way health authorities respond to residents' health concerns about coal dust', citing data on residents' lived experience as evidence that coal dust causes ill health (Higginbotham et al 2010).

A comprehensive analysis of health and air quality is beyond the scope of this SIA, which relies on the results of the air quality assessment findings (EIS Appendix L: Air Quality Technical Report). As noted in Section 7.1.4, atmospheric dispersion modelling undertaken as part of air quality assessment for the operational phase predicts cumulative background plus Project air quality pollutants to be below Project goals at sensitive receptors, i.e. to not be contributing to a decrease in air quality that would affect residents' health.

It is anticipated that with implementation of the proposed mitigation measures described in Appendix L: Air Quality Technical Report, the residual impacts will be "not significant" in regard to dust soiling and human health impacts.

Community concerns about air quality changes may persist regardless of the EIS findings. Clear and transparent communication about the EIS air quality assessment findings may assist to reduce community concerns. This will require ongoing communication with community members living adjacent to disturbance footprint to provide information about how dust from within the rail corridor and from freight trains will be minimised, and to enable any issues with respect to dust deposition to be addressed in consultation with concerned residents.

7.4.3 Mental health

The Project is likely to have both positive and negative effects on community mental health.

Construction

The Project will require property acquisitions, commencing prior to the construction period. Uncertainty about the property resumption process, future living arrangements and security, and the potential for impacts on amenity is a considerable source of stress and anxiety for some people whose land would be acquired. Directly affected landholders include people who have been financially and emotionally affected by the results of the current severe drought, who are particularly vulnerable to stress and anxiety. As described in Section 7.1.2, the Project will ensure personnel are available to work closely with residents whose properties will be acquired to reduce Project-related stress and practical difficulties with their transition to new living arrangements.

There is also potential for noise and vibration disturbances to cause stress and anxiety for residents near construction sites, particularly if those sites require extended periods of activity (as discussed in Section 7.1.4). This will be addressed in the Project's CEMP, and through stakeholder engagement and the complaints management process. Consultation also identified existing anxiety about the Project's potential to change local flooding patterns (refer Section 7.1.9).

ARTC is committed to supporting the wellbeing of communities impacted by the Inland Rail Program and recognises that activities during the design phase have caused concern and anxiety in the community. To address this, ARTC has developed Mental Health Partnerships with the Darling Downs and West Moreton PHN and the Brisbane South PHN. Further details are provided in Section 8.5.3.

Early implementation has resulted in increasing the availability and access to Beyond Blue's New Access program which provides mental health support for residents in communities along the Inland Rail alignment which can be easily accessed through a phone call. This program has been selected as it is utilising and strengthens existing mental health services rather than replicating and competing with existing providers. Issues causing stress or exacerbating residents' anxiety need to be addressed through provision of transparent and accessible information about the acquisition process, the results of the EIS, and strategies proposed to mitigate impacts on health, amenity, and connectivity.

Employment opportunities during the construction stage are likely to have positive mental health benefits for the individuals employed, particularly if they are exiting a period of unemployment or commencing their career. This would be particularly important in communities with high levels of unemployment such as Rosewood, Ebenezer and Willowbank, and for particular population groups where unemployment rates are high (such as Indigenous people and young people).

Operation

The community survey and community information sessions undertaken for this SIA revealed that there is anxiety about the perceived or actual impacts of the Project on quality of life in areas near the disturbance footprint. Participants held a broad range of concerns about impacts on the rural character and amenity of their environment, road safety, severance and connectivity within the community or farming properties, the potential for dust, noise and vibration impacts, flooding impacts, and property acquisition processes. The community also perceives change to be difficult, rating their capacity to adapt to change lower than other community attributes.

In addition to alterations to the movement network through road closures and re-alignments, the operational phase will cause wait times for motorists, cyclists and pedestrians encountering passing trains at level crossings. Research indicates that traffic delays may increase blood pressure and heart rate, and may have consequences for the long-term health of individuals (Morant 2015). ARTC will provide timely and well-targeted information about traffic delays, including an indicative schedule of freight train movements, and strategies that ARTC employs to reduce traffic delays.

Other potential sources of frustration and anxiety within the community may include:

- Travel delays at level crossings
- Noise and vibration disturbance for residents in proximity to the rail corridor
- Concern about particulate emissions
- Potential impacts on property values and re-sale potential.

Anxiety is the most common mental health condition in Australia and can have a temporary or prolonged effect on a person's quality of life and day-to-day functioning (Beyond Blue 2018). Whilst most people can cope well with a level of stress and anxiety, there is potential for stress related to the Project to affect individual and family wellbeing. Research indicates that the impacts of major projects for people who oppose them can include increased stress levels, a sense of things happening beyond one's control and distress induced by environmental change (University of Melbourne 2018).

Railway-based suicide is an additional concern, as evidence shows that access to a lethal means is a key risk factor in turning thoughts of suicide into actual suicide, and a rail line provides such lethal means (Toronto Public Health 2014). By turn, completed suicides and suicide attempts cause deep trauma amongst families and friends and within communities.

ARTC has a strong focus on creating a safe environment for all and supporting community wellbeing during the changes that Inland Rail will bring, including:

- Identifying 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 potential impacts
- Identifying opportunities and developing programs to improve safety outcomes for local communities

Prior to the commencement of Project operations, ARTC will engage with the PHNs and Queensland Health to gauge the need for any ongoing support for mental health services during the operational period. ARC is also establishing arrangements with QPS, QAS and QFES to enable cooperative responses to any incidents.

The Project is expected to lead to the establishment of new and/or expanded businesses and industries, increasing employment opportunities for people in the region. This would have positive mental health benefits for the individuals employed, as well as their families, particularly if exiting a period of unemployment.

7.4.4 Access to natural resources and active recreation

Pedestrian and cyclist movement

The main pedestrian and cyclist networks in the SIA study area are within towns and would not be directly impacted by the EIS investigation corridor. Informal pedestrian, horse or cycle routes between adjoining properties and neighbourhoods may be disrupted.

Boonah to Ipswich Trail

The Boonah to Ipswich Trail Plan (Queensland Government, 2011) identifies a planned but unconstructed route which includes a section within the Wild Pig Creek Road corridor in Undullah/Washpool. The status of planned works to develop the trail is uncertain, as acquisition of private properties within the planned corridor did not occur, and plans were 'mothballed' in 2012.

The Wild Pig Creek Road reserve is intersected by the Project at around Ch 42.8 km and Ch 47.8 km, where level crossings would be provided.

If the Trail is constructed in future, the quality of the quiet and natural outdoor experience along this section could be affected by periodic delays at level crossings or railway noise whilst trains are passing. This may require reconsideration of the location of the trail by the trail manager (forecast in the Boonah to Ipswich Trail Plan as a trust arrangement, which has not been established). SRRC officers also noted that there are popular horse and walking trails in the Undullah area where the amenity or connectivity of trails may be impacted by severance or noise disturbance.

ARTC will provide information to SRRC and community organisations including Bushwalkers of SEQ, Beaudesert Trail Horse Riders, Ipswich and District Trail Riders Club, and the Beaudesert Bushwalkers to enable trail users to re-plan their routes in areas where horse trails are affected.

Purga Nature Reserve

The Purga Nature Reserve is located approximately 200 metres north of the Project alignment near Ch 22.0 km, north-west of Peak Crossing and adjacent to Purga Creek. The 79 ha reserve is Australia's largest protected remnant endangered Swamp Tea-Tree forest, and provides a peaceful place for visitors wanting to experience this unique natural setting. The reserve offers access for visitors along easy graded walking and includes a wheelchair accessible boardwalk. Amenities include picnic facilities, toilets and mini-bus parking facilities. The reserve is close to Ipswich (at 15 minutes by car), accessed from Middle Road, off Cunningham Highway.

There would be no direct Project impacts on the nature reserve. With a laydown area located directly west and the Project alignment positioned to the south of the Purga Nature Reserve, the peacefulness of the experience for visitors may be disturbed by construction noise whilst works are occurring in this area. Traffic access to the reserve via Middle Road may also be intermittently delayed due to construction activities on Middle Road. Project communications will include notification of changes to traffic access on Middle Road, to allow visitors to plan their travel to and use of the reserve.

The peacefulness of the natural setting offered in the reserve for visitors may be periodically disturbed by the noise of freight train movements to the reserve's south, which may detract from community use and/or enjoyment of the Purga Nature Reserve as a passive recreational facility whilst trains are passing. ARTC will consult with ICC regarding any Council-planned works to upgrade facilities at the Purga Nature Reserve and support for initiatives such as increased interpretive signage which could offset this impact.

Water

Many local landholders are reliant on tank water, groundwater (via bores) or allocations from surface water systems. They were also concerned that interference with surface flows including creek systems would affect their access to water for farming purposes, or that bores could be affected by the Project's construction.

Assessment of surface water quality impacts for the EIS (Chapter 13: Surface Water and Hydrology) found that:

- During the construction phase, mitigation measures relevant to surface water quality would be sufficient to mitigate most potential conceivable impacts, however further mitigation may be required to ensure temporary erosion and control for construction are operating to an appropriate degree
- For the operational phase, ARTC's proposed impact mitigation measures were assessed to be sufficient for the purposes of mitigating impacts that could cause any of the impacts, and the operational environment is expected to comprise a stable and well-vegetated landform, and hence no erosion is expected.

As such it was considered that all practical measures to avoid or minimise degradation of existing water quality to protect human health and the environment from harm have been investigated and would be implemented for the Project.

Water will be required during construction for earthworks, conditioning of material, haul road and laydown maintenance, concrete batching (with two sites identified) and dust suppression. Water use and water allocations are a matter of considerable sensitivity for local communities who have been affected by the extended drought. As outlined in EIS Chapter 23: Draft Outline Environmental Management Plan, the Project will confirm source(s) for construction water requirements via consultation with relevant stakeholders, which are expected to include ICC, SRRC, Seqwater and landholders/occupants. Appropriate approvals and agreements will be sought for the extraction of water. Where private water sources are utilised for construction, monitoring will be undertaken during extraction to ensure volumes and conditions stipulated by license requirements and/or private landholder agreements are met.

With respect to impacts on groundwater during construction, as described in Chapter 14: Groundwater:

- There are a number of registered bores within, or near to, the groundwater study area, with potential to be damaged or become inaccessible during construction
- The risk of changes to groundwater levels or flows as the result of embankments or dewatering of cuttings was considered low
- Reduced groundwater levels from dewatering during construction of cuts and the tunnel has the potential to impact groundwater users (e.g. registered bores and surface water flows).

The assessment noted that water supply for construction is to be confirmed, and if groundwater supply forms part of the solution, then potential drawdown effects on nearby groundwater users (including registered and unregistered bores) would need to be assessed.

With respect to operation, the assessment found that:

- The potential exists for registered bores located within, or near the disturbance footprint to become inaccessible due to rail corridor restrictions after construction
- Lowered groundwater levels due to long term seepage into cuts and the Teviot Range tunnel through the Teviot Range has the potential to impact groundwater users, with further assessment and possible mitigation measures required as part of final design considerations.

The Project will work with all potentially affected landholders to identify and implement mitigation measures for any impacts on their access to groundwater.

7.4.5 Safety

Feeling unsafe can influence levels of anxiety and be a barrier to community participation and accessing services.

There appears to be a high level of perceived personal safety amongst communities in the SIA study area. This is evidenced in responses to the community survey conducted for this SIA, which valued the community as being family-oriented and safe. This is reinforced in a State-wide survey of perceptions of safety that reported a higher level of perceived safety here than is typical for Queensland (refer Section 5.7.7). Crime levels are also lower than typical for Queensland, with the exception of Rosewood where they are higher.

Non-local workers

Given that the Project is unlikely to generate an influx of new people to the area and that construction will generally be during daylight hours, it is unlikely that perceptions of safety ('stranger danger') will change for the general community. However, the location of work sites and laydown areas near private homes might engender anxiety about personal and property safety for some residents living adjacent to the Project.

ARTC will employ the following strategies to reduce concerns and the potential for any impacts on community safety:

- Enforcing a Code of Conduct containing requirements for positive behaviours and respect for local residents and businesses will apply to all contractor and Project personnel
- Ensuring that the contractor has appropriate workforce conduct policies and procedures, and complaints mechanisms which ensure fast and effective resolution to any issues experienced.

No changes to personal or property safety are anticipated during the operation phase of the rail line, with the exception of potential traffic-related safety issues as discussed below.

Domestic and family violence

Domestic and family violence (DFV) has significant immediate and longer-term impacts on the health and wellbeing of victims. While the reasons for domestic violence are complex, contributing factors include drug and alcohol abuse, irregular or intermittent work, mental health issues (including anxiety), stress and historical trauma (such as racial discrimination and disadvantage).

Improved access to employment could remove one trigger for DFV, potentially reducing occurrences. However, heightened stress related to disrupted accessibility, travel times, noise and other disturbances associated with the Project could increase the risk of violence. On balance, the Project is not expected to have a significant impact either way on levels of family and domestic violence.

Traffic safety

During construction there will be large and oversize loads including deliveries of equipment, building supplies and steel. This will necessitate interaction between Project traffic and public traffic, including school buses, which operate on several of the roads affected by the Project. There will also be increased traffic movements generated by personnel from throughout the Project region and adjacent LGAs travelling to a variety of work sites as required, with potential for laydown areas to accommodate personnel's vehicles.

Impacts may include:

- Deterioration of road surfaces due to truck weights (which is addressed as part of ARTC agreements with the relevant road authorities)
- Safety issues associated with fatigued or inattentive commuters
- Disruption of school bus and other public transportation.

The Project's TMP will outline detailed strategies to mitigate potential impacts on road safety, as forecast in EIS Chapter 23: Draft Outline Environmental Management Plan which provides that:

- Fatigue management measures should be introduced and enforced for all workers during construction
- Road safety measures to be implemented taking into consideration speed restrictions, driver fatigue, in-vehicle communications, signage, demarcations, maintenance, safety checks, and interaction with public transport, transport of hazardous and dangerous goods and emergency response and disaster management
- Relevant emergency services should be notified in advance prior to the movement of all hazardous/dangerous or oversize construction material and equipment
- Consideration should be given to limiting construction traffic on school bus routes during pick-up and set-down times on school days, alternatively appropriate school bus infrastructure could be installed.
- Temporary traffic management to be implemented, for example road signs stipulating reduced speed limits as per the TMP.

This will be supported by communication strategies to ensure stakeholders know about construction traffic routes, peak construction periods, the Project's workforce conduct policies, and how to contact the Project staff in the event of any concerns.

As the assessment of traffic impacts has assumed that operational personnel will reside within the Project region, the traffic assessment for the Project (Chapter 19: Traffic, Transport and Access) assumes that no new trips will be generated, as existing trips would be accounted for and the dispersed nature of these trips across the road network would have a minimal impact on road network operational performance.

During the operational phase of the Project, it is anticipated that occasional access to and from the corridor will be required to conduct routine inspection and maintenance works. Maintenance vehicles will utilise the access track that will be constructed for the majority of the inspection and maintenance activities. However, these activities are likely to be infrequent and the related traffic volumes are likely to be minimal with no envisaged impact to operational conditions of the surrounding road network.

Potential impacts on traffic safety during operations include:

- Changes to familiar travel routes due to road re-alignments
- Travel delays at level crossings whilst trains are passing
- An increased risk of road accidents (discussed in EIS Chapter 19: Traffic, Transport and Access), as the Project would increase vehicle exposure to rail crossings
- Heightened risk exposure for young males, young drivers, school children, older pedestrians and people with disabilities in crossing the rail corridor.

Queensland has the fourth highest normalised rate of level crossing collisions in Australia, at 0.4 collisions per million train kilometres travelled per year. Most of the serious injuries reported in Queensland since 2013 occurred within the greater Brisbane network (Queensland Health, undated).

A Queensland study has shown that driver decision making at level crossings is affected by the amount of time needed to wait, with frustration and risky behaviour more pronounced when drivers had to wait for longer times (Larue 2016). Risky behaviours include driving through flashing lights to beat the train, driving around boom gates, and performing U-turns or back-up movements. The study found that the longer the wait time, the greater the frustration and increased likelihood of risky behaviour. The study also noted that although collisions at level crossings are relatively infrequent, the severity of collisions is high, and collision risk increases with an increase in the number of level crossings and magnitude of traffic flowing through them.

Studies in North America have found that gender and age are also factors influencing behaviour at level crossings, with young male pedestrians more likely to cross against activated warning signals and drivers aged 25-35 years more likely to commit violations at level crossings (Morant 2015). School children, older pedestrians and those with disabilities were also found to be disproportionately represented in railway crossing fatality databases (Morant 2015).

ARTC will 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.

At the national level, the Inland Rail Business Case (ARTC 2015) anticipates that the Inland Rail Program as a whole will remove 200,000 truck movements from roads each year, resulting in improved road safety, a reduction in serious accidents and reduced truck volumes in regional towns.

Firefighting access

Community members raised concerns in consultation regarding the potential for construction or operation to impact on tracks used for firefighting access. As described in EIS Chapter 20: Hazard and Risk, the increase in the number of construction vehicles and oversize machinery along the construction corridor has the potential to impact the existing fire trails within the vicinity of these locations, reducing access to bushfire response. Construction may also introduce traffic on public roads which could impact on landholder evacuation during emergency incidents (e.g. bushfire) or on emergency vehicles' response times. Proposed mitigation measures provided in EIS Chapter 20: Hazard and Risk include:

- Detailed design of provision of access where local roads can facilitate emergency access
- First response firefighting
- Accessible and sufficient water supply for firefighting purposes
- Safe evacuation procedures.

The development of mitigation measures would be informed by engagement with the QFES and rural fire brigades during the detailed design phase to ensure a cooperative response to any fire risks affecting the EIS investigation corridor.

Hazards and risks to community safety

The Project's hazard and risk assessment (EIS Chapter 20: Hazard and Risk) identifies potential hazards falling into medium to high risk levels including incidents related to dangerous goods freight transport, trespass, pedestrian and community safety, interface with live trains and derailment, or involving travelling stock route, private access route, overbridges and emergency access.

Hazard mitigation measures have been developed for the Project and will be applied throughout its lifecycle. Controls include mitigation measures incorporated into engineering and design development, in addition to management strategies and procedures for construction and operations. The management of risks throughout the life of the Project will involve ongoing reporting, monitoring, reviewing and documenting the risks. The Project will also ensure that the requirements of the safety management system are implemented and communicated to all personnel.

7.5 Business and industry

This section discusses the Project's potential impacts and benefits for businesses and local industries.

7.5.1 Disruption of local businesses

The Project's location will avoid direct impacts on local business centres and is unlikely to affect the amenity of town centres.

Businesses whose amenity or access could be directly affected by the Project include:

- Near Calvert, a horse training and spelling complex, intensive horticulture businesses and dog breeding/kennelling facilities
- Bentonite and stockfeed producers operating from properties adjacent to Cunningham Highway at Ch 16.0 km.

Businesses near the disturbance footprint where there is potential for disruption to traffic routes during construction include:

- A large egg and broiler (meat) chicken farm on Ipswich-Boonah Road, 570 m north of Ch 25.0 km

- IRCEC, approximately 1 km east at around Ch 29.0 km to Ch 30.0 km
- Flinders Peak Winery, approximately 1.3 km west of Ch 31.6 km on Ipswich-Boonah Road.

ARTC will continue to consult with businesses and work with landholders to reduce the potential for impacts on the amenity and productivity of businesses during construction (via the CEMP) and via operational management standards and through community engagement during the operations phase.

The Project represents an important source of trade for transport businesses during construction. Over time during operations, long haul transport trips are expected to reduce in number nationally (ARTC, 2017) as the result of freight shifting to Inland Rail, however the Project is likely to facilitate an expansion of opportunities for transport from freight terminals and logistics centres.

7.5.2 Impacts on tourism

The Ipswich and Scenic Rim LGA Councils and communities have a strong focus on tourism development including nature-based/ecotourism, food/wine trails, adventure experiences and farm visits and stays.

Stakeholders' concerns about potential Project impacts included:

- Potential to affect event participation at the Ipswich Motorsport Precinct) with flow-on effects to other businesses
- Potential for Project-related workforce accommodation requirements to displace tourists
- Effects on the amenity of tourism properties near the disturbance footprint
- Loss of scenic amenity through impacts on views, including the visual effects of the embankment and bridge over Mt Flinders Road
- Potential diminished value of tourism properties due to any impacts on amenity or visitation.

Ipswich Motorsport Precinct

Ipswich Motorsport Precinct is located approximately 230 m north of Ch 14.2 km, adjacent to the Cunningham Highway, and hosts numerous events each month, including major events which attract many thousands of visitors. The Motorsport Precinct is a major contributor to the Ipswich LGA's events calendar and tourism visitation numbers.

Whilst the Motorsport Precinct itself hosts noisy activities, there is potential for users of facilities within the Motorsport Precinct to experience construction noise from works within the EIS investigation corridor as intrusive. This will be temporary as construction works move along the corridor, and dependent on the nature of works, however construction of grade separation structures over the Cunningham Highway (to the Precinct's immediate southeast) would take a longer period. Noise from Project construction, particularly noisy works such as piling or earthworks, could affect event patrons' enjoyment of events, or if they are deterred by noise, numbers of visitors. There is also potential for works for the Cunningham Highway grade separation to disrupt traffic accessing the Precinct, and Champions Way which borders the Precinct to the north may be used as a route for construction traffic, which could affect ease of access to the Precinct, and if not managed, could deter visitation.

With multiple lessees and event managers involved, including local, State and national events, the Motorsport Precinct's event calendar changes from year to year. During the detailed design phase, ARTC will consult with ICC (and if advised by ICC, key stakeholders such as lessees in the precinct and major event managers) to forecast the Precinct's event schedule during the construction phase, and identify the potential for construction activities (such as noisy works or temporary road closures) to affect activities and events within the precinct. Where possible, such works would be scheduled to avoid conflicting with major events. Use of Champion's Way and the Cunningham Highway by the Project and the Precinct will also be discussed with ICC and DTMR, to inform the Project's TMP and identify any cooperative mechanisms which will avoid impacts on precinct visitors. Specific measures agreed with ICC and other stakeholders will be considered in the CEMP.

Consultation between the Project and ICC will be maintained throughout the period in which construction works are occurring within 500 m of the Precinct.

Willowbank Motel (3 kms to the north of the Precinct) is a popular option for tourists visiting the Precinct. The contractor will need to consult with the Willowbank Motel to identify their event-related visitation and how any workforce use of the motel could be managed to avoid displacement of event visitors.

Tourism businesses near the disturbance footprint

Businesses supporting tourism which are located near the Project include the IRCEC which is located approximately 1 km east of Ch 29.2 to 30.0 km, the Flinders Peak Winery which is located approximately 1.3 km west of Ch 31.6 km, and the Ironbark Ridge Winery (which is currently closed to visitors) located approximately 2.3 km northeast of Ch 18.4 km.

As part of SIA consultation, the IRCEC expressed concern about potential noise impacts on accommodation and facilities within the site, and potential impacts from coal dust and other air quality issues, including impacts on the IRCEC's organic farm. IRCEC also noted that impacts on IRCEC could have economic impacts for accommodation and hospitality businesses in nearby towns.

EIS Appendix P: Non-operational Noise and Vibration Technical Report identified the potential for noise to affect the IRCEC and the Flinders Peak Winery. Some of the IRCEC's accommodation cabins closest to the alignment and the recreational grounds would be exposed to noise levels of up to 50 dbA whilst construction activities are nearby. The Flinders Peak Winery, including its accommodation units, would be affected by noise from bridge construction and roadworks, with noise levels of up to 70 dbA at times. Property-specific mitigation measures may be required to ensure that amenity impacts do not result in a decline in use of the accommodation, which could lead to effects on the viability of affected businesses. Construction noise is not expected to affect the Ironbark Winery.

EIS Chapter 23: Draft Outline Environmental Management Plan outlines relevant mitigation strategies which include:

- Construction works should be undertaken in accordance with the nominated hours of work
- Where practicable, alternative construction methods should be adopted to reduce noise and vibration impacts
- Staff training should be undertaken so that unnecessary sources of noise should be avoided. e.g. unnecessary shouting or loud stereos/radios on site are not tolerated, materials should not be dropped from height, metal items should not be thrown, doors should not be slammed, and vehicle radios and engines should be turned off wherever possible.

As described in Sections 7.1.4 and 7.4.2, air quality assessment undertaken as part of air quality assessment for the operational phase predicts cumulative background plus Project air quality pollutants to be below Project goals at sensitive receptors, which include establishments supporting tourism.

Tourism accommodation

As noted in Section 7.3.3, minimal demands for short term workforce accommodation are expected as a result of the Project, but there is potential for construction personnel to require occasional short stay accommodation, and the availability of motels and serviced units is affected by event-related and seasonal accommodation demands, with the cooler months generally attracting higher visitation, and peaks associated with major events. There is also potential for the demands of other major infrastructure construction projects to change the availability of accommodation during the time before the Project's construction commences.

Section 8.4 describes measures which will reduce the potential for Project personnel's accommodation demands to displace tourists, whilst enabling tourism accommodation establishments to benefit from any Project demand.

Scenic amenity

There is potential for road works, bridge construction and the visual impact of laydown areas during construction to affect tourists' general experience of the area, and to affect travel times. This will be temporary whilst construction activities are undertaken in particular areas, but some tourists may be deterred from visiting during these periods.

During operation, there is potential for waiting times at level crossings to diminish the quality of tourists' experience, however traffic delays due to rail crossings and road intersection are a common occurrence and are unlikely to be a significant deterrent for visitors.

There is also potential for diminished scenic amenity due to the Project's location within the rural landscape, particularly where the rail line would be elevated. Assessment of visual impacts (EIS Appendix I: Landscape and Visual Amenity Technical Report) found that the forested landscape character of the Teviot Range south of Flinders Peak would be affected by Project construction, and that significant visual impacts were anticipated from the Cunningham Highway looking southeast to Flinders Peak, and from Ipswich-Boonah Road looking northeast as the result of elevated bridge structures. Some visitors will see the Project as diminishing the rural character, and others will find interest in Project structures, and the occurrence of rail lines is common in rural areas. As such, significant decreases in visitation as a result of changes to visual amenity seem unlikely.

Some impacts on connectivity and scenic character are inevitable in areas near the Project during operations and where views to features such as Ivory's Rock, Flinders Peak, valleys and bush land would be interrupted.

When the Project's detailed design is confirmed, ARTC will consult with tourism-related businesses (wineries, accommodation facilities, farm stays, restaurants, cafes and specialty shops) located within 5 km of the Project to ensure there is a full understanding of how impacts resulting from road works, changes to the road network or noise/vibration may affect individual businesses. ARTC will then develop a strategy, working with any noise-affected tourism landholders, Scenic Rim Tourism Association, Ipswich Tourism Operators Network, ICC and SRRC, to ensure that both property-specific and generalised impacts on tourism values are mitigated.

ARTC will also work with the Scenic Rim Tourism Association and the Ipswich Tourist Operators Network to support their promotional and marketing campaigns during the construction period. This is expected to offset any deterrence of tourists as a result of the Project.

Wildlife

Community members have raised concerns regarding the Project's effects on the connectivity of wildlife habitats, with particular concern about koala habitats in relation to the safety of the animals and koalas as part of the area's natural tourism values. Approximately five directly affected landholders have advised they have koalas on their property, and the Ipswich Koala Protection Society has participated in ARTC consultation workshops. Landholders and the Ipswich Koala Protection Society are concerned about around what would happen to the koalas when construction starts and about the health and future of koalas in the region.

The C2K EIS Appendix J: Terrestrial and Aquatic Ecology Technical Report notes that areas of mature eucalypt open forest and woodland within the EIS investigation corridor may provide suitable habitat for koala. The EIS recommends biodiversity offsets and other management strategies to mitigate impacts on koala habitat, finding that the significance of residual impacts on koala habitat would be moderate to low following implementation of these measures. A fauna fencing strategy is also being developed as part of the Project design (refer EIS Chapter 6: Project Description).

The Project includes five fauna crossings for locations where bridge crossings will be constructed over waterways. A dedicated fauna corridor crossing will also be constructed as a canopy bridge and will require koala fencing to funnel fauna including koalas towards the crossing. Further information about potential impacts on flora and fauna is provided in EIS Appendix J: Terrestrial and Aquatic Ecology Technical Report.

7.5.3 Impacts on agricultural properties

The disturbance footprint traverses approximately 168 land parcels where the predominate land use is grazing on native vegetation, the majority of which are freehold. No properties where the predominate land use is cropping are directly affected, but some of the grazing properties also yield crops.

The agricultural properties where land would be acquired for the permanent disturbance footprint will range in size from one ha to 1,062 ha. Based on the current Project current design, land acquisition (as shown in EIS Appendix G: Impacted Properties) would affect approximately:

- For 63 lots up to 5 per cent of the lot will be acquired
- For 20 lots between 5 per cent and 10 per cent of the lot will be acquired
- For 45 lots between 10 per cent and 20 per cent of the lot will be acquired
- For 32 lots between 20 per cent and 50 per cent of the lot will be acquired
- For eight lots between 50 per cent and 100 per cent of the lot will be acquired.

Impacts of the Project on agricultural land is further discussed in EIS Chapter 8: Land Use and Tenure.

Decisions regarding full or partial acquisitions will be made by the Constructing Authority in co-operation with landholders. The owners of land parcels where larger percentages of the parcel's areas would be acquired may seek full acquisition, resulting in the loss of some small farming operations from local communities and stress for landholders who would need to transition to new arrangements. The number of agricultural properties which would cease operations will depend on the agreements made between landholders and the Constructing Authority.

Impacts on agricultural properties would commence during the pre-construction or construction phases, however the impacts of property severance could persist during operations. Impacts could include:

- Land acquisition reducing the size or usable areas of properties, and subject to agreements with the Constructing Authority, the potential need for grazing or cropping operations

- Dissection of grazing properties with a loss of productive land and potential for impediments to stock access and machinery movements, drainage and irrigation design
- Temporary loss of road access or reinstatement of road accesses in a less convenient location
- Interruption of access to dams or bores restricting use of water for stock, domestic purposes or irrigation, or severance of on-property drainage
- Demolition of dams removing the prime location for water harvesting within a property.

Landholders also have concerns about biosecurity i.e. the spread of weeds, seeds and pests, which will be addressed as part of the Biosecurity Management Plan to be developed as part of the CEMP.

Depending on the extent of disruption to property access and use, the owners of properties which remain in private ownership may experience interruption of production, a decrease in their ease of property management and maintenance, and potentially an increase in costs relating to restoring stock's access to water, or transport to market, which could affect the owners' livelihoods. The Constructing Authority will pay compensation for the loss of private interests in land, and compensation may also be payable in respect to costs related to purchase of replacement comparable land, costs associated with removal and relocation of assets and infrastructure, and other reasonable financial costs incurred that are a direct consequence of the resumption of the land.

The Project does not cross the Yackatoon Grazing Co feedlot (which supports a number of local grazing operations) but may impact on its operations due to potential impacts on the surrounding road network. The feedlot is accessed via Middle Road where the Project would result in an increase in road traffic and an increase in travel time due to the implementation of a level crossing on Middle Road and road diversions on the surrounding road network. Consultation with the feedlot's owners will be required to identify the need for any specific strategies to reduce the impact of increased traffic on this business, for consideration in the TMP.

Land that is currently utilised for the Purga Breeder Farm will not be located within the rail corridor, minimising the impact of the Project on this land use. The Purga Breeder Farm is accessed from Ipswich Boonah Road, and works to this road have potential to impact on the poultry farm's travel times during construction. A grade-separated crossing of Ipswich-Boonah Road is proposed, avoiding long term impacts.

The specific measures to be agreed with landholders will vary according to the impacts at each property. ARTC will consult with affected landholders to explain the land acquisition process and/or the result of EIS studies on noise and dust, as relevant, and work with landholders to reduce the potential for impacts on the amenity and productivity of businesses. This consultation will inform the detailed design, CEMP and its sub-plans and may include measures, to minimise impacts on agricultural properties as relevant, including:

- Property access arrangements
- Design measures to mitigate impacts on groundwater bores, fences or connectivity
- Surface water and erosion control
- Groundwater management and monitoring
- Noise and vibration mitigation
- Weed and pest management.

7.5.4 Stock and product movements

Movement of stock, feed and water on and between directly affected properties may be affected by the Project. No formally designated stock routes are located on the EIS investigation corridor, however informal stock movement routes will be severed, and the Project will impact on informal rail crossing points, restricting the movement of stock and agricultural commodities between properties and potentially handling facilities.

Solutions to loss of connectivity on and between properties will be developed through consultation with individual landholders during the detailed design phase, based on maintaining access to all properties and ensuring suitable stock crossings are provided for all grazing properties to ensure connectivity between fragmented properties, particularly between grazing areas and water sources.

Roadworks, re-alignments and changes to travel distances may affect farming businesses, e.g. an increase of the travel time required to deliver cattle to a stock yard may result in more time away from the farm or increased fuel costs. Roads which are crossed by the Project, and are likely to be connectors for producers to their markets include:

- Mount Walker West Road
- Rosewood Warrill View Road
- Cunningham Highway
- Middle Road
- Ipswich-Boonah Road
- Washpool Road
- Wild Pig Creek Road (formal and informal)
- Undullah Road.

Some landholders are concerned about the health and safety of their cattle and horses, including fears about stock wandering on to the rail line. Secure fencing is required for the rail corridor to maintain its safe operation and the detailed design for fencing would address the need to exclude animals from the rail corridor. The potential impacts of freight train noise on stock or poultry were also raised in consultation. The ToR for the EIS did not include the requirement to address potential noise impacts on animals.

Other landholders raised the possibility that importing and movement of material may result in increased threats to biosecurity, which has been addressed in detail in EIS Chapter 11: Flora and Fauna.

7.5.5 Local supply opportunities

The capacity of businesses in the Project region to supply the Project, based on the business profile outlined in Section 5.4.4 includes:

- The Ipswich LGA has considerable business strengths in the construction industry with 1,868 registered businesses in 2016-2017
- Ipswich City also has strengths in the transport, postal and warehousing sectors which could be strengthened by the Project
- Whilst agriculture dominates the Scenic Rim' LGA's business profile, the construction sector was also strong with 726 registered businesses
- Non-employing (owner-operated) businesses represented more than 60 per cent of businesses in each LGA

- There was a total of 4,600 small business (up to 19 employees) and 258 small to medium businesses (20 to 199 employees) between the two LGAs, but only four businesses (in Ipswich) with 200 or more employees.

Consequently, there is a broad business base from which to draw, but with large numbers of small businesses that may need to develop further capacity to participate in the Project's supply chain, which was confirmed in consultation with the Scenic Rim Chambers of Commerce.

The Project is likely to provide significant opportunities for local and regional businesses to participate in its supply chain. Supplies and services which will be required during the Project's construction are summarised in **Table 7-2**. Pre-cast concrete may be sourced from Ipswich, ballast material may be sourced from local quarries, and other major components such as fencing may be sourced within the Project region (with several suppliers based at nearby Amberley and Ipswich). Inland Rail is currently undertaking a procurement process for the manufacture and supply of sleepers for the Inland Rail Program. The outcomes of this procurement will determine where the sleepers are supplied from.

Project construction will also require a range of services, which may be sourced from within the Project region, as shown in **Table 7-2**.

Table 7-2: Construction inputs

Supplies	Services
Pre-cast concrete	Tree clearing
Ballast material	Electrical installation and instrumentation
Concrete sleepers	Rehabilitation and landscaping
Pre-built and panelled turnouts	Trades services (e.g. boiler makers and welders)
Steel	Professional services (e.g. environmental scientists, engineers, human resources)
Fencing	Traffic management and security services
Electrical components	Earthworks
Fuels and oils for plant and equipment	
Rehabilitation supplies (mulch, trees)	

Project supply opportunities during the construction phase may represent a substantial source of trade and an opportunity for local business growth. No businesses such as shops or fuel stations were noted within the EIS investigation corridor, however businesses at Rosewood (e.g. fuel stations, hotels, a supermarket, and plumbers, electricians and mechanics) and Peak Crossing, (e.g. hotel, petrol station and convenience store) are likely to benefit from construction personnel's expenditure as they pass through local communities.

To help prepare local businesses for Project opportunities, Inland Rail held a series of industry briefings in October 2019 to provide an update on the procurement and delivery strategy. The briefing sessions provided feedback from the 2018 Market Sounding which informed the Inland Rail delivery strategy, and provided information to businesses on the Expression of Interest process. During December 2019, Inland Rail held three information sessions with local communities including businesses (in Peak Crossing, Gatton and Toowoomba) to inform and consult on Inland Rail delivery, with a focus on the public-private partnership model, the progress of the planning and approvals process, and the Project's timeline.

For the operational period, services will be required for:

- Track maintenance
- Rehabilitation

- Maintenance of electrical and signalling infrastructure
- Level crossing and access track maintenance.

The benefits of supply would be more modest during the operations phase but represent a very long term opportunity which would support the viability of businesses and contribute indirectly to increased employment opportunities. Further information on economic benefits is provided in EIS Appendix S: Economic Technical Report.

The Inland Rail Program is subject to the *Australian Jobs Act 2013* (Cth) requirement to develop an Australian Industry Participation Plan (AIPP). ARTC is committed to providing local and Indigenous businesses and social enterprises with full, fair and reasonable opportunity to participate in the supply of goods and services on Inland Rail.

This commitment extends to ARTC's supply chain for Inland Rail. ARTC expects all contractors on Inland Rail to demonstrate the same level of commitment to providing local and Indigenous businesses and social enterprises with the opportunity to compete for work. Upholding this supply chain commitment supports ARTC's social licence to operate.

Proponents for Inland Rail construction projects are required to prepare and submit an Industry Participation Plan that addresses the requirements of the Inland Rail AIPP and demonstrates how they will spread local economic benefit on the Project.

ARTC commitments relating to the AIPP are as follows:

- Ensure that commitments made within the Inland Rail AIPP are implemented by ARTC and its supply chain
- Require that contractors prepare an Industry Participation Plan during the tender stage for implementation during construction
- Implement a clear and efficient process for businesses to source information about the project and potential supply opportunities, and to register their interest
- Ensure all procurement entities have a detailed understanding of business capability/ capacity of the study area and region before seeking bids to supply
- Ensure design specifications take account of Australian standards and, where international standards shall be used, provide avenues for Australian entities to identify how they can comply
- Include local and Indigenous content criterion and clauses in project procurement processes and contract documents
- Provide advance notice of supply opportunities
- Work with supplier advocates to promote supply opportunities and identify capable local suppliers;
- Host and/ or participate in supplier briefing and networking events
- Collaborate with government and industry stakeholders to develop and implement training and mentoring support that builds business capability
- Provide support to local and Indigenous businesses and social enterprises which enables them to understand the requirements of supplying to Inland Rail
- Provide formal feedback to suppliers that are unsuccessful in prequalification and/ or tendering
- Report on local and Indigenous industry participation outcomes (refer Section 8.6).

In line with the AIPP, ARTC has also developed a Sustainable Procurement Policy which will ensure that local, regional and Indigenous businesses (as well as other Australian businesses) will have opportunities to supply the Project (refer Section 8.6).

7.5.6 Facilitation of industrial development

The Project would facilitate access to proposed logistics hubs in Ebenezer and Bromelton.

The SEQ Regional Plan 2009-2031 identifies Ebenezer as an RIA and a 'Regionally Significant Employment Area'. The Project would traverse the RDA, which will be an industrial area of regional, State and national significance, connected to Brisbane, Sydney and Melbourne via Inland Rail (Department of State Development 2010). The location of the Ebenezer RIA reinforces its potential as a significant contributor to the local, regional and State economies, by offering accommodation for a diversity of industry types including 'large footprint (land extensive) industrial uses removed from sensitive uses.

The RIA will also accommodate aligned commercial, retail, administration and community uses, and a Major Neighbourhood Centre to service the needs of the surrounding existing population and workforce, enhance the attractiveness of the area and provide a focus for community interaction and gathering (ICC 2014). As such, the Ebenezer RIA will offer a large range of diverse employment opportunities, including those directly facilitated by Inland Rail.

The RIA consists of land parcels under the ownership of different companies or individuals. An Intermodal Freight Terminal (IFT) may be located immediately south of the Ipswich Motorsport Precinct to provide the central distribution, loading and unloading for the Project. This may facilitate access to efficient rail transport for businesses, including transport and logistics businesses, if train stopping points are conveniently located to the RIA.

The Project would link the rest of the Inland Rail Program to the K2ARB project, which will facilitate development of the Bromelton SDA and be a significant benefit for businesses to be established there. There is potential for significant business growth and diversification to result, with consequent benefits for the employment of residents in the Ipswich and Scenic Rim LGAs, and adjoining LGAs.

ARTC's rail network plays a key role in Australia's transport supply chain, being used to move a range of commodities including general freight and agricultural products.

7.6 Cumulative impacts

Cumulative impacts are those that result from the successive, incremental and/or combined effects of an action, project or activity when added to other existing, planned and or reasonably anticipated future ones (International Finance Corporation 2013).

Projects which may contribute to cumulative social impacts and estimations of their construction timeframes are shown in **Table 7-3**, up until Project year 20, as known. This includes construction of major projects in the Project region (as further detailed in EIS Chapter 22: Cumulative Impacts) and construction of rail projects in SEQ that may impact on labour availability including:

- Inland Rail's Border to Gowrie (B2G), G2H, H2C, C2K projects which are expected to commence pre-construction in 2021, with construction following in 2022
- Inland Rail's K2ARB project which is expected to commence pre-construction in 2023
- Cross River Rail (CRR) which commenced construction in late 2019 (CRR, 2019)
- Brisbane Metro, with detailed design and construction during 2019-2022 (Brisbane City Council, 2019)
- Gold Coast Light Rail Stage 3A which is expected to begin construction in 2021 (DTMR, 2019).

Workforce numbers for Inland Rail projects have been drawn from draft and final EIS documents, as available. CRR construction is expected to require an estimated average of 1,600 construction personnel and up to 2,200 construction personnel at peak (CRR Joint Venture, 2011). Approval documents providing peak workforce numbers were not available for the Brisbane Metro and Gold Coast Light Rail Stage 3A projects, and have been estimated on the basis of various industry and Brisbane City Council media articles at 2,600 personnel and 760 personnel respectively.

Construction of the Salisbury to Beaudesert Rail Connection is expected to commence at some time in the next ten years however there is a lack of data on timing and workforce requirements to enable meaningful assessment. RAAF Base Amberley upgrade works are underway, with potential future upgrades to provide unspecified numbers of construction and operational roles. No data were available on construction workforce numbers for the RAAF base.

The South West Pipeline is a proposed 24 km bulk water pipeline to connect the Beaudesert Water Treatment Plant to the Wyaralong Water Treatment Plant, with an additional 3 km bulk water pipeline to connect the Wyaralong Water Treatment Plant to the Flagstone development area and the SEQ Water Grid pipeline network. Pending completion of the design and project approvals, construction of the South West Pipeline is expected to start construction in 2021. Construction workforce data were not available for this project.

There is also a possibility that development of the Willowbank Industrial Park and a proposed expansion of the IRCEC could coincide with the Project's construction period, and ongoing development of SDAs and PDAs may also require significant construction labour forces, sectors of which (e.g. heavy and civil construction) will be required in common with Inland Rail projects. The available information on anticipated workforces for these projects is insufficient to enable meaningful consideration as part of cumulative impact assessment.

Variables which will influence the potential for cumulative impacts on housing, labour availability, short term accommodation or social infrastructure include:

- The availability and distribution of construction labour at the time projects commence
- The timing for any coincidence in peak workforce demands
- Changes in housing availability, with significant housing developments planned in the Greater Flagstone and Ripley PDAs likely to increase availability
- Fluctuating demands for short term accommodation, with higher tourist demands in winter and event-related demands at several times throughout the year
- The likelihood that some projects' currently proposed schedules will change.

As such, quantitative assessment of cumulative demands on housing, accommodation labour availability and social infrastructure is not possible. The following qualitative analysis should be considered as indicative rather than conclusive. For the purpose of cumulative impact assessment, the construction timeframe includes pre-construction activities.

Table 7-3: Cumulative project set

Project	Construction timeframe	Construction workforce (peak)	Overlap in construction periods – by project year							
			1	2	3	4	5	6	7-10	11-20
C2K	2021-2026	620								
K2ARB	2023-2025	100								
B2G	2021-2026	950								
G2H	2021-2026	596								

Project	Construction timeframe	Construction workforce (peak)	Overlap in construction periods – by project year							
			1	2	3	4	5	6	7-10	11-20
H2C	2021-2026	410								
Greater Flagstone PDA	2011-2041	Unknown								
Bromelton SDA	2016-2031	Unknown								
Ripley Valley PDA	2009 – 2031	Unknown								
South West Pipeline	2021	Unknown								
RAAF Base Amberley future works	2016-2022	Unknown								
Remondis Waste to Energy Facility	2021-2023	200								
Cross River Rail	2019- 2024	2,200								
Brisbane Metro	2019-2022	2,600								
Gold Coast Light Rail Stage 3A	2021-2023	760								

7.6.1 Local impacts

Assessment of cumulative social impacts on potentially affected communities considered adjacent Inland Rail projects and other projects within approximately 5 km of the disturbance footprint, as this is the area were the physical interface of multiple projects is most likely to have a material impact.

Social impacts may occur where the Project's impacts combine with those of other major projects to affect:

- Connectivity of the local road network, traffic volumes and amenity in the Calvert/Lanefield area in relation to H2C, and in the Kagaru area in relation to K2ARB
- Perceptions of community safety, due to large numbers of personnel in and around local communities
- Access to skilled labour, in relation to the combined impacts of projects on construction labour availability, and demands for housing and accommodation
- Demands for health or emergency services as the result of increased daytime populations, or increased stress resulting in the need for additional support services
- Travel times, resulting in driver frustration.

Connectivity

The Project directly links with the adjoining H2C project to the west and to the K2ARB project to the east. Construction works for C2K and H2C will adjoin in an area near Waters Road, Calvert, with potential for local traffic delays. In the Kagaru/Allenview area, works required to facilitate the C2K and K2ARB projects, if they coincide, may cause traffic delays in the Undullah Road/Kilmoylar Rd area in Kagaru. There is also potential for construction of the South West Pipeline to require works in road corridors which could add to any impacts on travel times in the Kagaru/Allenview area.

Incremental increases in traffic on Project region roads are expected as residential developments are sold and occupied, however this is envisaged within the SEQ Regional Plan and transport plans for the Scenic Rim, Ipswich and Logan regions.

The Remondis Waste to Energy Facility is proposed for construction in 2021-2023 on a site located approximately 30 km east of the Project. Information on this Project's construction traffic routes is not available to provide any indications of potential cumulative impacts.

Inland Rail projects' TMPs will outline detailed strategies to mitigate potential impacts on road safety, as forecast in EIS Chapter 23: Draft Outline Environmental Management Plan and summarised in Section 7.4.5. The Project's communication and travel demand strategies will include consideration of the potential for works from adjoining Inland Rail projects to affect local conditions, including as a result of construction traffic including spoil transport vehicles (refer EIS Chapter 21: Waste and Resource Management).

Community safety

As noted in Section 7.2.2, residents may be concerned about the potential risks to community safety relating to increased numbers of non-local workers, including 'stranger danger' and traffic safety, with any cumulative demands for non-local labour likely to increase this concern. ARTC workforce management strategies which address this include enforcing a Code of Conduct containing requirements for positive behaviours and respect for local residents and businesses, ensuring that the contractor has appropriate work conduct policies and procedures, implemented for all Inland Rail work sites.

Amenity

Analyses presented in EIS Appendix Q: Operational Noise and Vibration Technical Report found that at the sensitive receptors within the C2K project area, the primary source of noise will be the Inland Rail trains as they travel on the C2K alignment, and trains on the adjacent H2C project section are not expected to result in a cumulative increase in noise levels at the sensitive receptors adjacent to the C2K alignment in Calvert.

Notwithstanding, the presence of laydown areas, roadworks and increased traffic associated with construction of Inland Rail projects may affect the amenity of properties in the Calvert/Lanefield area during construction. Information on K2ARB's construction activities was not available to assess the potential for cumulative impacts on amenity resulting from construction of the Project and K2ARB during the same period.

Consultation participants in communities near the northern part of the SIA study area noted concerns about the potential for cumulative operational noise impacts as the result of noise from sources including highways, the RAAF Base Amberley, the Willowbank Raceway and Jeebropilly Mine. EIS Appendix Q: Operational Noise and Vibration Technical Report assessed potential noise impacts against the existing baseline which includes various noise sources, but did not identify cumulative noise impacts as the result of the RAAF Base, Motorsport Precinct or Jeebropilly Mine. Noise levels relating to additional rail traffic to the Interstate Line through the connection between the Project and the Interstate Line near Kagaru did not trigger an investigation of noise mitigation.

Housing and accommodation

The Project expects to draw the majority of its construction workforce from within the Project region and nearby communities within the Greater Brisbane region, with personnel returning home each night. With potential for a small number of specialist personnel to be sourced from outside these regions, the Project may make a contribution to cumulative impacts on housing or short term accommodation (hotels and motels). If cumulative demands for labour result in local shortages and the Project needs to draw workers from further afield (refer Section 7.6.2), a contribution to cumulative demands on housing and accommodation is also possible.

As discussed in Section 5.5.3, rental vacancy rates in postcode areas near the EIS investigation corridor and Ipswich's central suburbs ranged from 2.4 per cent to 4.2 per cent in December 2019 (with rates over 3 per cent indicating a healthy rental market) (REIQ, 2019). This represented approximately 510 dwellings in December 2019 (refer Section 5.5.3). However, any cumulative influxes of non-local personnel seeking rental accommodation could put pressure on rental housing stocks in local communities, with the potential to deplete rental housing stocks and increase rental costs, which could impact on low income households.

Potential housing demands relating to the coincidence of several projects' construction periods would be spread across several LGAs as identified in the previous paragraphs, and are not quantifiable. Cumulative housing demands are likely to be offset by the increasing availability of housing in the Ripley Valley and Greater Flagstone PDAs.

Management measures which address the Project's potential contribution to demands on rental housing are detailed in Section 8.4.

The Project region's supply of short term accommodation is primarily located in the centres of Ipswich, Boonah and Beaudesert, and potential impacts are discussed in Section 7.6.2.

Social infrastructure

A cumulative increase in construction workers within local communities has the potential to affect demands for policing and emergency services with respect to traffic management and road safety policing. Government funding for police, fire and ambulance services available to local communities may require review by the relevant departments to ensure cumulative project demands do not impact on local community access to services. ARTC will provide workforce ramp-up estimates to the QPS, QAS, QFES, DCDSS and Queensland Health to assist with their planning.

As personnel's health service requirements would primarily be met in their home communities, cumulative demands on health services are less likely, but there is potential for workers to be transported to major hospitals in the Ipswich and Logan LGAs if treatment is required. This is not expected to be a significant drain on major hospitals' services.

There is potential for stresses associated with Inland Rail and other construction projects to increase local demands for support services. As outlined in Section 8.1.4, Inland Rail has developed partnerships with the Darling Downs and West Moreton PHN and Brisbane South PHN, to strengthen local access to services delivered Ipswich, Beaudesert and Beenleigh.

Employment and labour

In combination, projects listed in Table 7-3 have the potential to provide significant employment and business opportunities for local residents during 2021-2026.

If multiple other projects as listed in Table 7-3 are constructed in the same time frame as the Project, there may also be a draw on trades and construction labour within local communities. ARTC's strategies addressing labour draw include working with CSQ to identify and address labour shortages, and facilitating the availability of construction skills training, which will help to offset demands which could affect local access to labour, and leave a legacy of increased local workforce skills.

Longer term, the operation of Inland Rail projects, the Bromelton SDAs and the RAAF Base Amberley have the potential to contribute to long term employment opportunities for the residents of potentially impacted communities.

7.6.2 Regional impacts

This section refers primarily to cumulative impacts which may be experienced in the Project region as a whole, acknowledging that employment opportunities, supply opportunities and cumulative demand for labour are also relevant to other Queensland regions.

Employment and labour

The Project has potential to contribute to significant cumulative increases in employment opportunities in the Project region, both directly through construction employment opportunities, and through involvement of local businesses in the supply chain.

The Inland Rail Business Case (ARTC 2017) identifies an anticipated additional 16,000 jobs will be required for the overall Inland Rail Program at the peak of construction, with an average of 800 jobs per annum over the 10 year construction period. The 10 year delivery schedule would support economic activity in the regions and create regional jobs in Queensland, New South Wales and Victoria during both construction and operations. An average of 700 additional jobs per annum, program wide, is anticipated over 100 years of operation.

If Inland Rail's B2G, G2H, H2C and C2K projects were constructed simultaneously, and all workforce peaks coincided, a total of approximately 2,576 construction personnel would be required across the Goondiwindi, Toowoomba, Lockyer Valley, Ipswich and Scenic Rim LGAs, with personnel also likely to be drawn from the Greater Brisbane region. Workforce peaks would be short-lived so this possible maximum requirement, if it occurred, would last for a period of months rather than years.

Construction of Inland Rail's K2ARB project is planned to commence in 2023 and is assumed to primarily rely upon labour from the Brisbane, Logan and/or Gold Coast LGAs, requiring an estimated 100 personnel. Again assuming that all Inland Rail projects' workforce peaks coincided, the cumulative total peak (maximum case) for the five Inland Rail projects could see a requirement for approximately 2,676 personnel working across the Goondiwindi, Toowoomba, Lockyer Valley, Ipswich, Scenic Rim, Logan, Brisbane and/or Gold Coast LGAs during 2022-2023.

Infrastructure and development projects located within the Project region (as listed in **Table 7-3**) are also likely to draw construction labour from SEQ during 2021-2026. Assessment of cumulative labour demands within the Project region would be speculative at best, particularly as construction personnel are highly mobile within and across Australian states, and project schedules will vary from current estimates, but if the labour force requirements for several projects peaked at the same time, a requirement for up to several thousands of construction personnel at work in the Scenic Rim and Ipswich LGAs during 2021-2026 is a possibility. In the context of the large construction industry labour force located within SEQ, this is unlikely to cause a significant adverse impact on other industries access to labour, however there is potential to exacerbate current shortages of civil engineering professionals, construction project managers and construction trades, and to contribute to shortages of trades people and machinery operators, which may constrain domestic and business access to tradespeople.

The construction periods for Cross River Rail (Dutton Park to Bowen Hills in the Brisbane LGA), Brisbane Metro (Eight Mile Plains to Bowen Hills in the Brisbane) and Gold Coast Light Rail Stage 3A (from Broadbeach South to Burleigh Heads in the Gold Coast City LGA) may overlap with Inland Rail project construction phases. If the peak requirements for these three rail projects coincided, based on estimated peak construction workforces of 2,200 personnel for Cross River Rail, 2,600 personnel for Brisbane Metro and 760 personnel for Gold Coast Light Rail Stage 3A, a requirement for more than 5,560 construction personnel could result. If peak requirements for construction of all Inland Rail projects and these three rail projects also coincided, approximately 8,200 personnel would be required across SEQ. This is an unlikely scenario but represents a 'maximum case' estimate in relation to the demands on labour and in relation to employment opportunities.

In combination, the cumulative impacts of railway construction projects in SEQ could lead to significant demands for construction occupations as detailed in Section 7.2.1, affecting access to tradespeople for residents, businesses and other industries.

The expansion in the construction sector 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 Project region. The associated supply of construction materials, the development of associated external infrastructure and complementary services will also require additional workforce beyond those directly associated with the Inland Rail and other major projects, stimulating jobs and growth in the region.

Inland Rail projects may also catalyse the positive impacts of industrial development by attracting rail-dependent industry to locations such as Ebenezer, and facilitating development of intermodal freight facilities (e.g. in relation to the Cunningham Highway). Also, by providing a strategic link between Inland Rail and the interstate railway line, the Project has the potential to contribute to attracting rail-dependent industries to the region. There is therefore potential for significant positive cumulative employment opportunities in the Project region.

Housing and accommodation

Cumulative demands for short term accommodation may be experienced in Ipswich, Beaudesert and/or Boonah, and in the Logan or Brisbane LGAs. Whilst the Project's contribution to cumulative demands for temporary accommodation is expected to be small, the cumulative demands of several projects being constructed concurrently could exhaust short term accommodation in the Project region which would otherwise be used by tourists, with the potential for flow-on demands for tourism businesses. The Project's AMP will include measures to monitor the Project’s potential demands for short term accommodation and enable corrective action if required to reduce Project demands.

Social infrastructure

The Project’s contribution to cumulative demands on health and emergency services relate primarily to an increase in the day-time population of the Project region during construction. This would increase demands on policing, emergency services, and health services. As these services are typically funded on the basis of their resident populations, consideration of additional Queensland Government resourcing for services provided by the QPS, QAS, QFES, DCDSS and Queensland Health in the Project region may be required. As noted in Section 7.6.1, ARTC will provide workforce ramp-up estimates to these agencies to assist with their planning.

There is also potential for simultaneous construction of several projects to lead to increases in demands for support services to cope with project-related stress. ARTC will participate in monitoring of demands on health and community services as outlined in Section 8.7. Cumulative impacts may need to be monitored by the Queensland Government and/or local councils to enable cooperative responses which support local residents to cope with changes relating to multiple projects.

Traffic and spoil management

As noted in Section 7.1.5, opportunities to optimise the use and placement of spoil material between adjacent Inland Rail projects will be identified during the detailed design and construction phases. Excess spoil will be transported to other sites by road, with State-controlled roads used where possible.

The transport of spoil from Inland Rail projects could increase traffic volumes on key routes, with potential to affect levels of service or traffic safety. An accurate assessment of cumulative traffic and transport impacts as the result of spoil transport is not possible at this stage, and would be undertaken during the detailed design phase. Further discussion of spoil management is provided in Appendix V: Spoil Management Strategy and Appendix U: Traffic Impact Assessment Technical Report.

7.6.3 Summary

Potential cumulative social impacts have been evaluated in relation to their likelihood and consequence to the social environment, as summarised in **Table 7-4**. The likelihood and consequence criteria used to determine the significance of cumulative impacts are provided in in Section 9.

Table 7-4: Potential cumulative social impacts

Other Projects	Impact area	Likelihood	Consequence	Significance	Mitigation measures	Residual Significance
H2C and K2ARB	Construction works and traffic in the Waters Road area in Calvert/Lanefield and Undullah/Kylmoylar Roads in the Kagaru area may affect traffic flows	B	2	Medium (negative)	Detailed design for both projects will include consideration of construction scheduling to reduce cumulative impacts	C2 (negative)
	Increased traffic volumes on construction traffic routes if shared by more than one project may affect traffic conditions or perceptions of traffic safety	B	3	High (negative)	TMPs for the two projects will consider potential cumulative impacts on traffic and coordinate traffic management accordingly	C3 (negative)
B2G, G2H, H2C, K2ARB	There is potential for cumulative labour force demands to require non-local personnel for the Project, with potential for consequent demands on housing and/or short term accommodation	C	4	High (negative)	AMP required of contractors for all Inland Rail projects	C3 (negative)
	There is potential for labour draw in Scenic Rim/Ipswich region affecting access by businesses, industries and households	C	3	High (negative)	Inland Rail Skills Academy partnerships to identify training pathways and programs for local people	C2 (negative)
	Ipswich and Scenic Rim businesses are likely to benefit from Project and personnel expenditure of the combined Inland Rail projects	B	2	High (positive)	Inland Rail's AIPP and Sustainable Procurement Strategy will maximise the involvement of businesses	B3 (positive)
Bromelton SDA	There is potential for cumulative labour force demands to affect other businesses' and industries' access to labour	C	3	Medium (negative)	Inland Rail Skills Academy partnerships to identify training pathways and programs for local people	C2 (negative)
	There is potential for synergies between Inland Rail and the Bromelton SDA to increase employment and business development opportunities	B	3	High (positive)	N/A	B3 (positive)

Other Projects	Impact area	Likelihood	Consequence	Significance	Mitigation measures	Residual Significance
Greater Flagstone PDA	A requirement for civil construction labour throughout the PDA's development may result in cumulative demand for skilled trades and civil construction labour, however some skills groups (e.g. domestic building construction) would be different to those required for the Project	D	2	Medium (negative)	Inland Rail Skills Academy partnerships to identify training pathways and programs for local people	D2 (negative)
RAAF Amberley Base future works	There is potential for cumulative labour draw in Project region affecting access by businesses, industries and households	C	3	Medium (negative)	Inland Rail Skills Academy partnerships to identify training pathways and programs for local people	C2 (negative)
Cross River Rail, Brisbane Mero and Gold Coast Light Rail Stage 3A	There is a possibility that cumulative labour force demands could result in reduced labour availability in the Project region and nearby LGAs, with potential for consequent demands on housing and/or short term accommodation	C	3	High (negative)	Inland Rail Skills Academy AMP required of contractors for all Inland Rail projects	C2 (negative)
Any/all projects in Project region	Potential for cumulative increases in construction traffic leading to safety concerns and local drivers' fatigue or frustration with road works and traffic congestion	C	3	Medium (negative)	TMPs for Inland Rail projects will consider potential cumulative impacts on traffic and coordinate traffic management accordingly	C2 (negative)
	Labour draw in the Project region leading to requirement for non-local personnel to stay locally, with consequent cumulative impacts on housing, short term accommodation and social infrastructure (particularly emergency services)	C	4	High (negative)	Inland Rail Skills Academy AMP required of contractors for all Inland Rail projects	C3 (negative)
	Expansion in the construction sector would support employment availability and flow-on demand through the construction industry	B	3	High (+)	Not required – local business participation strategies outlined in Section 8.6	B3 (+) (High)

8 Social Impact Management Plan

This section details the Project's SIMP and describes how the Project will engage with communities and stakeholders, mitigate social impacts, enhance Project benefits and opportunities for the Project region, and monitor and report on the delivery and effectiveness of management measures.

8.1 Introduction

This section provides a detailed framework for mitigation of social impacts and enhancement of Project benefits and aims to:

- Provide actions for the mitigation of negative impacts on stakeholders and communities
- Incorporate stakeholder inputs on mitigation and enhancement strategies
- Support adaptive management of social impacts, by enabling communication between stakeholders and the Project during the detailed design, pre-construction and construction process, to identify any need for improvements to management measures
- Describe ARTC's initiatives and partnership opportunities which will maximise local employment and business opportunities and bring about long-term benefits for local communities.

The SIMP includes:

- Information about:
  - SIMP implementation
  - Inland Rail's social performance program
  - The adequacy of proposed management measures
  - How stakeholder input has been considered in the SIMP
  - Engagement with Councils
  - Links to local and state planning.

Five action plans:

- Community and Stakeholder Engagement (Section 8.2)
- Workforce Management (Section 8.2.9)
- Housing and Accommodation (Section 8.4)
- Health and Community Wellbeing (Section 8.5)
- Local Business and Industry (Section 8.6).

Each plan includes:

- An overview of the key impacts and opportunities identified in Section 7
- Objectives and desired outcomes
- Measures to mitigate social impacts and enhance Project opportunities
- The timing for delivery of mitigation measures, i.e. detailed design, pre-construction and construction phases.

A monitoring program is provided in Section 8.7 to support tracking of SIMP delivery and effectiveness, and enable adaptive management if there are changes to the Project or social baseline values, and to address any emerging or unanticipated issues. Section 9 provides an evaluation of social impacts and opportunities, prior to and following the implementation of the measures outlined in the SIMP.

8.1.1 SIMP implementation

During the EIS process, ARTC has worked with a range of stakeholders to identify issues and priorities, and develop management measures to be included in the SIMP. Management measures that were initiated during the EIS phase include those addressing training and development, business awareness of Project opportunities, mental health service capacity and contributions to community development. Engagement with Councils and Government agencies will continue during the remainder of the EIS phase to review the proposed management measures, develop further detail of initiatives to be implemented in cooperation with stakeholders. and agree specific outcomes, strategies and performance metrics for partnerships.

As noted in Section 4.1, a delivery method for the Project will be confirmed in future project stages and will involve ARTC contracting with a suitably experienced construction management company (the Contractor). The Contractor's role is defined in EIS Chapter 23: Outline EMP as including:

- Prepare, maintain and implement the CEMP
- Deliver the Project in accordance with all laws, including conditions of approvals
- Provide notifications and reports, as required by law, including conditions of approvals
- Ensure the construction workforce are properly and regularly trained in environmental responsibilities, including cultural heritage responsibilities, in accordance with the CEMP
- Establish and maintain a complaints management system, to receive and respond to complaints.

The Contractor will be required to implement SIMP commitments. Section 8.2.4 describes ARTC and Contractor responsibilities for community and stakeholder engagement. Further details of respective responsibilities for ARTC and the contractor will be developed as part of the tendering process. ARTC will have dedicated personnel to coordinate and monitor SIMP implementation.

Detail pertaining to implementation during each Project phase is provided below.

Detailed design and construction planning

If the Project is approved, the current Project design will progress to the detailed design and construction planning phase. Changes to the current Project design or construction methodology are possible during the detailed design phase, e.g.:

- Design refinements or decisions by the Constructing Authority may result in a change to 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
- The contractor's innovations in impact management may change the frequency or level of impacts.

ARTC will review changes to the design or construction methodology which have potential to change social impacts, and if a material change in impacts is foreseen, revise the SIMP measures to address the expected change in social impacts.

During the detailed design phase, ARTC and the Contractor will also collaborate with relevant stakeholders to detail and refine the co-operative measures described in each sub-plan, and agree specific outcomes, strategies and performance metrics for partnerships. This will inform the Contractor's implementation of SIMP commitments and ARTC's social performance program delivery including:

- Partnerships and projects to support mitigation and enhancement of benefits
- The respective responsibilities of ARTC and other stakeholders
- The program for implementation
- SIMP monitoring.

Social impacts such as anxiety about land acquisitions or environmental changes are likely to continue during the detailed design phase, and land acquisitions or the relocation of DTMR tenants would commence. The Constructing Authority will be responsible for working with landholders and tenants throughout the land acquisition process.

Measures provided for the detailed design phase address :

- Impacts (such as stress) which are already occurring
- Measures which require a collaborative process or a 'lead time' to be effective (e.g. capacity building and training programs).

Pre-construction

Project activities commencing during the pre-construction phase (2021-2022) include land acquisition which may result in stress to affected households and changes to property use, and land clearing which may change the character of these areas. Measures which address these impacts are included in the action plans.

As for the detailed design phase, measures which require a 'lead time' ahead of the construction phase are also identified for the pre-construction phase.

Construction

Based on the Project's current design, SIA has identified a range of potential social impacts and opportunities during the construction phase as detailed in Section 7. Many of the measures pertaining to the construction phase (2022-2026) will be initiated during preceding stages, and implemented during construction as detailed in Sections 8.2 to 8.6. Measures to be initiated during the construction phase also include actions to prepare for the operations phase.

Operations

As detailed in Section 7, potential impacts of the Project's operation (from 2026) include changes to the road network, periodic disruptions to traffic at level crossings, the potential for railway noise to affect the amenity of properties near the Project, and the potential for an increased risk of road-rail accidents or rail suicides.

Prior to commissioning the Project, a SIMP for the operational phase will be developed in accordance with ARTC's established management frameworks for rail operation, including:

- Road-rail safety management
- Rail noise management
- Workforce development
- Stakeholder engagement.

This will be informed by the monitoring undertaken during the construction phase, which includes stakeholder engagement in monitoring impacts and the effectiveness of mitigation measures.

The SIMP for operations will include community and stakeholder engagement strategies for the commissioning and operational phases, as detailed in Section 8.2.5.

The SIMP for operations will be implemented during the first three years of operation. Any need for a SIMP following Year 3 of operations will be identified in consultation with the OCG.

8.1.2 Inland Rail's social performance program

Inland Rail's social performance program has developed in response to SIA/SIMP requirements for Inland Rail projects, Commonwealth guidelines and expectations, stakeholder feedback, and corporate polices/approaches being established to support Inland Rail's delivery. Figure 8-1 provides an overview of Inland Rail's social performance approach to maximising local and Indigenous participation.

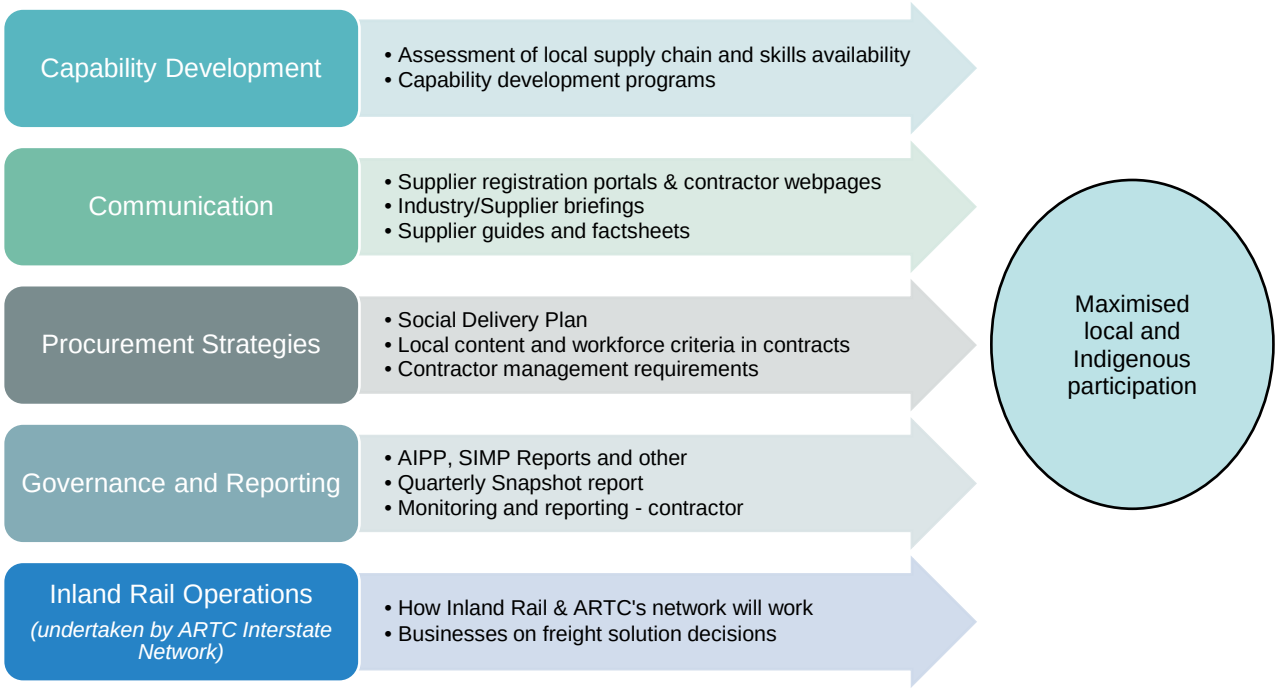


Figure 8-1: Inland Rail social performance approach to maximising local and Indigenous participation

The social performance program has five themes (aligned to the SIMP sub-plans), each with associated desired outcomes as shown in **Table 8-1**, and with a clear focus on maximising local benefits. The Australian Jobs Act defines 'local' as including Australian entities. To maximise the Project's benefits in the Project region, ARTC has adopted the following hierarchy for workforce and industry participation strategies:

- Project Area: LGAs which the alignment directly passes through (Ipswich and Scenic Rim LGAs)
- Region: LGAs outside the Project Area, but within 125 km radius of the Project Area
- Rest of Queensland: All of the State of Queensland other than the Project Area and Region
- Rest of Australia: All of Australia other than Queensland.

At Project level, the objectives of Inland Rail's social performance program have been contextualised to address the findings of the SIA and ensure that management measures are targeted to the C2K Project region. This includes a focus on the Ipswich and Scenic Rim LGAs, and impacted communities in proximity to the alignment. Links between social performance outcomes and the SIA/SIMP are shown in **Table 8-1**.

Table 8-1: Social performance outcomes and links to SIA/findings/SIMP measures

Themes	Outcomes	Link to SIA findings/SIMP	Section
Stakeholder and Community Engagement	Inland Rail actively engages with communities on what matters to them and resolves issues swiftly and respectfully	The SIA has been informed by the results of engagement with stakeholders. ARTC continues to consult with key stakeholders in the review and finalisation of the EIS. The SIMP details ARTC's ongoing engagement with stakeholders to develop and implement mitigation measures and involve stakeholders in the SIMP monitoring process.	8.2
Workforce management	Inland Rail provides employment opportunities for local and Indigenous jobseekers and contributes to building skills in the communities we impact	Employment of local people (particularly from the Ipswich and Scenic Rim LGAs) is a key local benefit and a major priority for local stakeholders. The SIMP describes ARTC's focus on local employment including the requirement for contractors to develop contractual targets and commitments in consultation with ARTC for the employment of Ipswich and Scenic Rim LGA residents, Indigenous people, young people and women. An overview of outcomes of contractual commitments will be publicly reported on a quarterly basis and include local employment, female employment and Indigenous participation in the Project. The Inland Rail Skills Academy will facilitate local skills development to maximise the local workforce's capacity for involvement in Inland Rail and other major projects. For example, the scholarship program initiated with USQ is accessible to residents in the project region, and ARTC has agreed with Councils that Inland Rail Skills Academy training programs will identify cross-over skills with RSIS priorities in each LGA, and work to develop those skills ARTC's Indigenous Participation Plan has a clear focus on enabling Indigenous participation in Project employment. ARTC is engaged in ongoing consultation with Traditional Owners, DATSIP and CSQ to target training and development programs to local Indigenous people.	8.2.9
Housing and Accommodation	Inland Rail accommodation solutions minimise negative impacts to local housing markets	In drawing the majority of its workforce from the Ipswich, Scenic Rim and nearby LGAs, requirements for workforce housing or short-term accommodation are expected to be minimal. The contractor will be required to deliver an AMP which meets ARTC principles for housing and accommodation management and reflects the outcomes sought by SRRC and ICC e.g. avoiding use of caravan parks, avoiding creation of new or inappropriately sized residential lots and managing any demands for short term accommodation to avoid impacts on the local tourism trade.	8.4

Themes	Outcomes	Link to SIA findings/SIMP	Section
Health and Community Wellbeing	Inland Rail recognises its role in supporting and positively contributing to community wellbeing during the changes that Inland Rail will bring	The potential for impacts on amenity, connectivity, local character and mental health is identified in the SIA. The Project has committed to the development of a Community Wellbeing Plan in cooperation with Councils and other stakeholders to define, develop and implement measures to support community resilience and wellbeing. Inland Rail Community Sponsorships and Donations Program will also support community wellbeing in local communities.	8.5
Local and Indigenous Industry Participation	Inland Rail is committed to supporting local and Indigenous businesses to ensure they are prepared for and provided full, fair and reasonable opportunity to participate in Inland Rail	The Ipswich and Scenic Rim LGAs' business profiles have strengths in the construction industry, and the SIA process identified strong interest in Project supply chain opportunities. ARTC's Australian Industry Participation Plan and Sustainable Procurement Policy have a key focus on supporting local industry and procurement. ARTC has commenced development of business capability strategies in cooperation with DSDTI and will deliver early activities post approval. Additionally, ARTC will require its contractor to deliver business capability development strategies in the Ipswich and Scenic Rim LGAs.	8.6

8.1.3 Adequacy of proposed mitigation measures

The mitigation and management measures outlined in the SIA include:

- ARTC commitments that are being implemented as part of the Project's design
- Design, construction and commissioning environmental management measures provided in EIS Chapter 23: Draft Outline Environmental Management Plan, with operational measures defined in each chapter
- Strategies that are being developed as part of Inland Rail's Social Performance program
- Measures that have been identified as part of the SIA process, including through stakeholder engagement.

The adequacy of these measures is discussed below.

Design responses

ARTC's design responses have included:

- Locating the Project alignment within the existing gazetted corridor or road reserves to reduce land acquisitions, severance and impacts on property use and management
- Designing road-rail interfaces to maintain connectivity and safe operation of the road network
- Property-specific measures which respond to landholders' inputs regarding access to and within properties, and avoidance of farm infrastructure where possible.

ARTC design responses have reduced but not removed the potential for impacts such as the need for residents to relocate due to land acquisition, property severance, disruption of agricultural businesses, and impacts on rural amenity. ARTC has committed to continued engagement with directly affected and nearby landholders to address their specific concerns.

Environmental impacts

Measures outlined in the EIS at Chapter 23: Draft Outline Environmental Management Plan and detailed in the relevant technical reports are designed to avoid or mitigate environmental impacts that could result in social impacts, e.g. noise and vibration, changes to air quality, changes to the road networks and visual amenity impacts.

The SIA assumes that the measures identified in the Draft Outline Environmental Management Plan, technical chapters and the CEMP will be effective in reducing environmental impacts in compliance with the Project's approval conditions.

Uncertainty exists in that, whilst changes to environmental qualities may be within regulatory criteria, individuals react differently to environmental changes, and issues such as noise and dust may still be experienced as diminishing amenity or affecting lifestyles. The Project will ensure the availability of a proactive responsive stakeholder engagement program and a responsive complaints management process to support identification of any issues which may require refinement of mitigation measures.

Social performance

Social performance strategy implementation will be a collaborative process with various stakeholders, and the success of strategies will be partially dependent on the outcomes of those collaborations. ARTC has set clear social performance requirements for its contractors to support its social performance strategies.

Social performance strategies are expected to increase the value of Project benefits to local communities.

Measures identified through SIA

Mitigation measures which are outlined in following sections have been developed in response to stakeholder inputs (refer Section 8.1.4) and based on the SIA consultants' experience in social impact management. The measures are proposed in order to:

- Reduce the likelihood that impacts will occur by, e.g.:
  - Identifying issues to be considered in further detail during the detailed design phase, in order to avoid or minimise impacts through the design and contracting process
  - Enabling local participation in employment, thereby reducing demands on housing and services
  - Managing workforce accommodation demands and workforce behaviour
- Reduce the consequence of social impacts through, e.g.:
  - Engagement with stakeholders to refine mitigation measures such as site-specific (e.g. laydown area) and property-specific measures, to avoid or reduce impacts on amenity, property access and connectivity
  - Partnerships and projects which will offset impacts on amenity, community cohesion and local character, and strengthen community resilience
  - Provision of information and engagement strategies which will assist stakeholders to anticipate and cope with changes to environmental qualities, road access or service demands
- Increase the likelihood and local value of Project benefits by:
  - Highlighting employment, training, business and community investment priorities
  - Describing ARTC's existing initiatives which will maximise community benefits.

The risk ratings provided in Section 9 indicate the SIA team's evaluation of the degree to which the likelihood and/or consequence of social impacts will be reduced by the mitigation measures proposed, considering:

- Stakeholder inputs
- The duration of impacts
- Project responses to issues raised by stakeholders
- ARTC commitments and social performance strategies
- Measures outlined in EIS Chapter 23: Draft Outline Environmental Management Plan
- Measures identified through the SIA process.

The monitoring framework provided in Section 8.7 will enable ARTC, the contractor and stakeholders to track the delivery and effectiveness of the SIMP and develop corrective actions (i.e. additional or refined mitigation measures) if required.

8.1.4 Stakeholder inputs to mitigation measures

Stakeholders made a range of suggestions and recommendations regarding actions that ARTC could consider to mitigate adverse Project impacts or maximise Project benefits.

Key themes in relation to impact mitigation related to:

- Route selection and alignment
- Compensation for directly affected landholders and nearby residents
- Management of impacts on residential amenity and property use, including noise, vibration and dust control measures
- Minimising impacts on the road network and traffic safety
- Transparent and respectful engagement which informs and involves stakeholders in further stages of the Project
- Communication with and support for residents affected by Project-related stress
- Cooperation with Councils and Queensland Government agencies including Queensland Health, QPS, QFES, and QAS to confirm the detail of mitigation measures.

Key themes in relation to suggested enhancements largely related to:

- Public infrastructure upgrades such as better road connections
- Investment in long-term community amenity and specific local investment ideas
- Business and industry engagement and various partnership opportunities
- Ensuring local people benefit from Project employment opportunities.

Stakeholder suggestions about mitigation and enhancement strategies are provided in **Table 8-2**, which references how suggestions and recommendations have been addressed.

Table 8-2: Stakeholder inputs on social impact mitigation and enhancement

Issue	Suggested mitigation measures	How addressed
Route selection	Find an alternative route to the rail corridor that has been gazetted (SFRC)	The Project has been designed to be constructed within the gazetted corridor The EIS team is required to assess the Project alignment as provided, including the Project's interactions with the gazetted SFRC

Issue	Suggested mitigation measures	How addressed
	Avoid or reduce impacts on agricultural properties	ARTC is working with landholders to ensure that a satisfactory level of access between adjoining properties is maintained, and to identify actions which will minimise or offset changes to connectivity or changes to water flows which affect their properties
Indigenous values	Involvement of Yuggera Ugarapul People in cultural awareness training for contractors	Cultural awareness training for Project personnel in consultation with Yuggera Ugarapul People
	Interest in establishing an Indigenous Rangers program to be involved in environmental management and rehabilitation works	ARTC will encourage Yuggera Ugarapul People to meet with the Queensland Indigenous Land and Sea Ranger Program staff (funded by DES) to explore potential for an Indigenous Rangers program to be established in the Project region
	Facilitate access to EIS, provide invitations to community information sessions and provide assistance with submissions to the EIS	ARTC will ensure advice on access to the EIS is provided to the Yuggera Ugarapul People, invite them to community information sessions and facilitate assistance with development of a submission to the EIS if requested
	Need for cultural heritage assessment of the locations of any new quarries proposed by ARTC	A CHMP has been developed and signed with the Yuggera Ugarapul People In addition, Yuggera Ugarapul People will be invited to be involved in any further assessment of cultural heritage values relating to additional quarry sites proposed by ARTC
	Ongoing consultation with Yuggera Ugarapul People to maximise opportunities for involvement	ARTC's Indigenous Participation Advisor is working with Traditional Owner groups and local communities to support their consideration of Project opportunities
Amenity	Provide the highest standard of noise and vibration mitigation and air quality management, including noise barriers Install and pay for all residential properties to have double glazed windows Identify and communicate Project benefits Build a public swimming pool in the area	EIS Appendix P: Non-operational Noise and Vibration Technical Report and Appendix Q: Operational Noise and Vibration Technical Report consider the potential for noise impacts and proposed mitigation measures designed to avoid or reduce noise and vibration impacts The Project will manage environmental impacts in accordance with its approval conditions in order to minimise impacts on amenity Measures to support mitigation of impacts on amenity are provided in Section 8.2 Project benefits are addressed in the SIA (e.g. Sections 7.2 and 7.5) The Project will engage with Councils and communities with respect to social investments in local amenity
Property acquisition and values	Compensation for any loss of property values Enable rezoning or change of use of properties to take advantage of the rail connection Compensate landholders next to the line for noise and inconvenience Early acquisitions requested	ARTC has engaged with landholders whose properties would be transected or bordered by the Project to identify mitigation measures addressing impacts on farm management, access and residential amenity. Land acquisition agreements will address the need for compensation for direct effects on properties The Project will employ a suite of environmental management measures as outlined in EIS Chapter 23: Draft Outline Environmental Management Plan and relevant technical chapters to reduce construction noise impacts and inconveniences such as traffic delays and dust, to reduce impacts on amenity and therefore the potential for impacts on property values

Issue	Suggested mitigation measures	How addressed
		The Project is unable to compensate adjacent landholders for noise and inconvenience ARTC will advise the Constructing Authority of landholders' wishes in relation to early acquisitions Support for mitigation of impacts on affected landholders is addressed in Section 8.2
Connectivity	Minimise road closures Advise public of potential road closures Improve and upgrade road networks Refine proposed Washpool Road interface with Project Extend Washpool Road to the Beaudesert area to create a short-cut for the local community Ensure roads are safe and maintained Reduce potential for traffic delays	Where possible, the Project's current design has minimised road closures. Proposed road closures are identified in the EIS. Following Project approval, agreement from the relevant road authority (i.e. DTMR or Councils), the appointment of the contractor and the confirmation of which roads will be closed will be known and notification will be provided ARTC is working with SRRC on an acceptable realignment solution for Washpool Road Extension of Washpool Road to the Beaudesert area was not considered as part of the Project TMP will include measures to mitigate impacts on traffic volumes, traffic safety and travel times
Public transport	Include provision for passenger rail inclusion as part of the Project design	Provision for passenger rail is outside the Project's scope
Road safety	Provide grade separations for all crossings (avoid level crossings) of public roads including Middle Road which is of particular concern Review proposed solution for Paynes Road	Road safety is considered in detail in EIS Appendix U. ARTC is using Australian Level Crossing Assessment Model, a nationally recognised methodology for safe design level crossings Government funding will be used to build Inland Rail, so while grade separation may be favoured, where safe level crossings can be achieved, the financial feasibility needs to be considered Discussions with ICC regarding a potential grade separation of Middle Road are ongoing Paynes Road realignment is being reviewed in light of community concerns
Housing and accommodation	Accommodation plan required for construction workforce to manage potential cumulative impacts on local short-term accommodation	This is addressed in the SIA at Section 8.4
	Consider impacts on caravan parks and their residents Consider the potential for impacts on the availability of affordable housing	The Project alignment is more than three km from the nearest caravan parks Project personnel will be prohibited from using caravan park accommodation in the Project region Mitigation of impacts on short term accommodation, caravan park access and housing are addressed in the SIA at Section 8.4
Communications infrastructure	Fund enhancements to internet and mobile phone infrastructure	Enhancements to internet and mobile phone infrastructure have not been considered as part of the Project
Health and wellbeing	Prevent dust entering water tanks/settling on rooves/solar panels	The potential for dust to affect homes or water tanks, and management measures to reduce dust are considered in EIS Appendix L: Air Quality

Issue	Suggested mitigation measures	How addressed
	Listen to people's concerns and then mitigate them Keep people informed of changes as they happen Treat directly affected people well as they are very stressed Representation of directly affected landholders on CCC (CRG)	ARTC is undertaking a comprehensive engagement program as part of the EIS process (refer Appendix C: Consultation Report) ARTC has initiated a mental health partnership to assist community members who are feeling stress or anxiety related to the Project. ARTC is in regular consultation with Yuggera Ugarapul People. This will continue during the detailed design phase, with a particular focus on business and employment opportunities The contractor will initiate a community reference group (CRG) which will be maintained throughout construction, with future need for the CRG to be agreed with CRG members and DSDMIP following the conclusion of construction Mitigation of impacts on community wellbeing is addressed in the SIA at Section 8.5
Emergency services	Early and regular engagement with QFES, QPS, QAS and SES to develop cooperative management measures	Cooperation and engagement with emergency services with is addressed in the SIA at Section 8.5
School bus routes	Cooperation with schools regarding school bus routes	School bus routes are addressed in the SIA at Section 8.5
Employment and training	Ensure local people can benefit from Project employment and training opportunities Ensure local employment targets specify Project region not just greater Brisbane region	ARTC is working with a range of stakeholders to maximise the involvement of local residents in Project employment The construction contract will include specification of contractor's goals for employment of people from within the Project region ARTC has established the Inland Rail Skills Academy to support workforce training and development ARTC is working with local communities and Government stakeholders to identify education and training pathways, and employment opportunities for local residents during and post construction ARTC is working with DITRDC, DATSIP and CSQ to develop training programs to be delivered through the Inland Rail Skills Academy Working with the two Councils' RSIS coordinators to align skills training programs with RSIS priorities
Indigenous training and employment	Ensure Yuggera Ugarapul people and other local Indigenous people have access to training and employment opportunities Include a focus on skills training and employment young people and mature jobseekers Employ an Indigenous mentor for construction personnel Requirement for involvement of Yuggera Ugarapul People in Project construction needs to be specified as part of contracts	ARTC is working with Yuggera Ugarapul people to support their readiness for employment (refer Section 8.2.9) The Project will continue to engage with Yuggera Ugarapul People to provide access to information about business and skills requirements Project personnel will include Indigenous mentors ARTC will require the contractor to specify and meet Indigenous employment goals Indigenous training and employment are addressed in Section 8.2.9

Issue	Suggested mitigation measures	How addressed
	Yuggera Ugarapul People interest in meeting with the contractor once awarded	
	Yuggera Ugarapul People meeting with Ipswich City Council and Inland Rail to identify potential for early skills development/work experience for Yuggera Ugarapul People Interest in opportunity to talk with Government agencies that will be involved in Inland Rail projects	ARTC will encourage Yuggera Ugarapul People to meet with ICC discuss potential skills development partnership ARTC has coordinated a meeting between Yuggera Ugarapul People and DATSIP to discuss the Project and assistance available for business capacity and training programs
Local business development	Provide workshops to the business community promoting the opportunities for business growth, employment and training both during construction and operation Ensure local and regional businesses benefit from the Project Align with Council's regional development initiatives, to build businesses' capacity to participate	ARTC is working with DSDTI to identify local and regional businesses with potential capacity to supply the Project, and to develop capacity building initiatives ARTC will implement its Australian Industry Participation Plan to ensure local and Indigenous businesses and social enterprises are provided full, fair and reasonable opportunity to participate in the supply of goods and services on Inland Rail Local businesses are encouraged to register on the Inland Rail website and through Tenderlink Measures addressing local business opportunities and impacts on businesses are provided in Section 8.6.
Tourism	The need for construction planning to consider scenic values which support amenity and tourism	Appendix I: Visual amenity and landscape and EIS Chapter 23: Draft Outline Environmental Management Plan provide detailed mitigation measures for impacts on visual amenity and landscape values Potential impacts on tourism are addressed in the SIA at Section 8.6.
	Place Project in tunnel/cut to pass IRCEC and Peak Crossing Winery, and erect noise mitigation walls	The Project's construction methodology considered the potential for construction noise impacts and includes mitigation measures to reduce noise impacts The necessity of strategies such as placing the Project in tunnel or cuts near these locations to avoid noise impacts was not established in Appendix P: Construction noise and vibration
Indigenous business participation	Encourage Indigenous businesses to participate in Project supply Early advice to Yuggera Ugarapul People on businesses/skills that contractors require, and on tender release	ARTC's Indigenous Participation Plan outlines ARTC's commitment to supporting Indigenous businesses to participate in the Project ARTC will enable a meeting between Yuggera Ugarapul People board representatives and the contractor, once appointed

8.1.5 Engagement with Councils

The Project has consulted extensively with ICC and SRRC regarding a range of issues which are linked to social outcomes, including design issues, road-rail interfaces, flooding risks, environmental management measures, traffic management, waste management and impacts on Council utilities.

As detailed in EIS Appendix C: Consultation report, ARTC's responses to Council inputs on mitigation of Project impacts have included:

- Development of hydraulic design criteria, bridge and culvert structure design and design refinements addressing Councils concern about changes to flooding patterns and debris from flood events
- Identification of suitable road access alternatives for all formed roads that would be impacted during construction and operation in consultation with Councils, emergency services, landholders and DTMR
- Confirmation of emergency access and fire and life-safety requirements for the Project
- Incorporation of future road planning requirements into the Project design (for example, Cunningham Highway upgrades) and ensuring that rail access is not precluded for proposed adjoining third-party industrial hubs
- Design responses to specific areas of concern e.g. Wild Pig Creek Road, Middle Road and Brennans Dip Road, and confirmation of further consultation with Councils, DTMR, and local communities as part of detailed design to inform the location and preferred treatment for each road–rail interface.

The results of SIA-specific consultation with Councils on social impacts and benefits and proposed management measures are reflected in the:

- Workforce management sub-plan (refer Section 8.3), which includes a strong focus on local employment and training opportunities, Indigenous employment opportunities, and alignment with Council on RSIS regional development priorities and Skilling Queenslanders for Work (SQW) programs
- Housing and accommodation sub-plan (refer Section 8.4), which incorporates SRRC and ICC inputs regarding the use of low-cost accommodation, avoidance of impacts on caravan parks, management of workforce demands on short-term accommodation used by tourists and avoidance of inappropriate residential lot development
- Health and community wellbeing sub-plan (refer Section 8.5), which includes the framework for co-operation with Councils and other stakeholders to offset impacts on social values such as amenity and local character, and make positive contributions to community cohesion and resilience
- Local business and industry sub-plan (refer Section 8.6), which reflects Councils' priorities for maximising the involvement of local businesses in the Project's supply chain, and the importance of tourism to the two LGAs.

ARTC will continue engagement with ICC and SRRC during the draft EIS public display phase and following review of Council submissions to the draft EIS as detailed in Section 8.2.10. The results of further engagement with Councils during and after display of the draft EIS will be reflected in the information provided to OCG by ARTC prior to the Coordinator-General's evaluation of the EIS.

8.1.6 Links to State and local planning

Links between mitigation measures discussed in the SIMP and State and local planning priorities (identified in Sections 2.4 and 5.4.5) are summarised in **Table 8-3**.

Table 8-3: Mitigation measures' links to planning priorities

Plan/Policy	Link with mitigation measures	Section
SEQ Regional Plan goals	Measures to maximise local employment and local business participation will support SEQ Regional Plan goals such as 'grow', 'prosper' and 'sustain' in the Project region	8.3, 8.6

Plan/Policy	Link with mitigation measures	Section
	The Project's cooperation with Traditional Owners, including engagement to support employment opportunities, cultural awareness tours and ongoing cultural heritage management activities, recognises Indigenous cultural knowledge and connection to land	8.2
Ipswich and West Moreton Regional Plan	Measures to maximise local employment and local business participation will support the development of infrastructure as a key economic development driver for the Ipswich and West Moreton region	8.3, 8.6
Advance Ipswich	Measures to maximise local employment and local business participation provides support for Advance Ipswich's goals of Strengthening our Local Economy and Building Prosperity Measures to mitigate impacts on tourism as a highly valued industry are included in the SIMP	8.3, 8.5
Scenic Rim Community Plan 2011 - 2026	Measures addressing potential impacts on character and tourism recognise the importance of the Scenic Rim's environment and communities to lifestyle and to tourism	8.2, 8.6
	Measures which address potential impacts on mental health and community wellbeing support the plan's goal for health, engaged and resourceful communities	8.5
Employment and training programs	Inland Rail is cooperating with Regional Skills Initiative Strategy (RSIS) officers in each Council to identify opportunities for cooperation in skills development.	8.3
	Jobs Queensland is currently working with ICC to support skills and employment growth in the region with a focus on the manufacturing industry. ARTC will consult with ICC to identify opportunities to align with training and employment programs being developed as part of this cooperation.	8.3
	ARTC is working with Councils to plan SQW programs to support the involvement of under-represented groups in training and sills development initiatives	8.3

8.2 Community and stakeholder engagement plan

EIS Chapter 23: Draft Outline Environmental Management Plan and the relevant EIS appendices provide detailed measures to mitigate environmental impacts which may result in impacts on social values such as amenity and lifestyle, connectivity, local character or business uses. ARTC will require a focus on residents' amenity in the Project's CEMP and Construction Noise and Vibration Management Sub-plan (CNVMP), referencing specific environmental management measures and SIMP actions where relevant.

Notwithstanding, community members may experience diminishment of amenity and local character due to changes to the landscape, the noise environment and the road network, effects on community cohesion, and fear and stress about the Project's potential impacts.

The purpose of the Community and Stakeholder Engagement Plan outlined in the following subsections is to support mitigation and adaptive management of impacts including:

- Disruptions to the use, amenity or access of private properties during construction, by providing guidance for engagement with directly affected landowners and nearby residents
- Stress and the potential to exacerbate disadvantage, by enabling continuity of engagement between the EIS and land acquisition process, access to support if required, and ongoing engagement with affected landowners
- Impacts on amenity, connectivity and cohesion, by ensuring that community members and other stakeholders have access to information and communication channels which help them understand the nature, duration and effect of Project works, and how to resolve issues as they arise

- Concerns about property values, by sharing information about environmental impacts and management measures.

The Community and Stakeholder Engagement Plan includes:

- The objectives and performance measures for engagement
- Stakeholders to be engaged
- Partnerships and agreements which are in progress or being developed
- Responsibilities for engagement implementation
- Measures for ongoing engagement, including engagement prior to Project approval, proposed communication tools and activities, and actions that ARTC will undertake and/or require of the Contractor, including the timing for each action i.e. detailed design, pre-construction and construction phases
- An outline of the CRG/s to be established during the detailed design phase
- The complaints management handling procedure
- Monitoring and reporting provisions for community and stakeholder engagement
- Mechanisms for incorporation of stakeholder inputs in refinement of management measures.

8.2.1 Objectives and performance measures

ARTC recognises that ongoing engagement with landholders, Traditional Owners, communities and other stakeholders that will be impacted by or stand to benefit from Inland Rail is central to the Project's success.

The objectives, desired and performance indicators for community and stakeholder engagement are shown in **Table 8-4**.

Table 8-4: Engagement objectives, desired outcomes and performance measures

Objective	Desired outcomes	Performance measures
Establish and maintain engagement mechanisms which build relationships between ARTC and its stakeholders	Community and stakeholder relationships facilitate information sharing to support adaptive management of social impacts	▪ A majority of landowners are satisfied with the management of Project impacts on their properties ▪ Number of complaints about Project impacts
	Cooperative and respectful relationships exist between ARTC, the Principal Contractor, construction personnel and community members	▪ CRG feedback confirms ARTC has engendered positive relationships
Support mitigation of impacts on amenity, community cohesion and local character through stakeholder engagement and delivery of local community programs in partnership with community and government stakeholders.	Initiatives identified through stakeholder engagement have benefits for local communities and offset impacts on amenity, character and cohesion	▪ Number and outcome measures (to be determined with partners) for community partnerships and programs in potentially impacted communities
	Stakeholder issues and grievances are identified, evaluated, addressed and recorded	▪ ARTC responds to complaints from community members as per the ARTC Complaints Management System ▪ Complaints and their resolution are recorded and reported as part of SIMP reports

Objective	Desired outcomes	Performance measures
Enable adaptive management of impacts on amenity, connectivity and community values during construction	Community members have access to information and support to assist adaptation to changes resulting from the Project	▪ Mitigation measures are refined where necessary in response to stakeholder feedback ▪ CRG feedback confirms satisfactory access to timely information about the Project and management measures ▪ Landowners who need to move from within the Project footprint have access to support, if required ▪ Mental health partnership is maintained during the construction phase

8.2.2 Stakeholders

The key stakeholders addressed by this engagement plan include:

- Landholders in and near the disturbance footprint
- Residents, community organisations and businesses in potentially impacted communities, including towns and rural localities
- Traditional Owners and other Indigenous community members
- ICC and SRRC
- PHNs and community service organisations (currently including Lifeline, Lives Lived Better, Artius and the Richmond Fellowship)
- Government agencies including Queensland Health, QPS, QAS, QFES, Department of Education, DESBT, DSDTI, DATSIP, DCDSS, DHPW, DITRDC and DES.

Key stakeholders that are also addressed as part of other SIMP action plans include:

- Education and training providers (Section 8.3)
- The managers of potentially impacted community facilities (Section 8.5)
- Government agencies who plan or provide social infrastructure or economic development including:
- Queensland Health, QPS, QAS, QFES and Department of Education (Section 8.5)
- DESBT and DSDTI (Sections 8.6)
- Businesses and business and industry organisations (Section 8.6).

ARTC will maintain a stakeholder register, building on the register developed during previous Project phases, to ensure regular and consistent engagement with stakeholders. Stakeholder interactions will be documented in order to monitor the success of engagement and identify issues to be addressed as part of implementing the Project's environmental management strategies.

8.2.3 Partnerships and agreements

During the EIS process, ARTC has been working with a range of stakeholders to develop partnerships and agreements to support management social impacts and opportunities. The current status of partnerships and agreements with stakeholders is outlined in **Table 8-5**. Partnerships and agreements will be further progressed with stakeholders during the Project approval process and after the Project is approved. The Project will be delivered by the Contractor who will have a significant role in implementing specific activities and agreements relating to the construction phase.

Table 8-5: Status of partnerships and agreements

Impact/benefit	Detail	Status
Use of private property	ARTC has engaged with directly affected landholders to discuss property access, water access, mitigation of impacts on property infrastructure, and minimising impacts to connectivity across the rail corridor. ARTC will continue consultation during the EIS display period when landholders have had access to the EIS. ARTC will provide information about the properties within the corridor to the Constructing Authority, including the results of any relevant property-specific agreements with landholders.	Current and ongoing
	The Constructing Authority will not begin to acquire land until the corridor is confirmed, the Project is approved, and the gazetted corridor is finalised. During the construction phase, the contractor will assume responsibility for relationships with landholders.	Commencement date to be determined by Constructing Authority
Effects on cultural landscapes	Cultural Heritage Management Plans (CHMPs) (CLH017009) for the Project were developed between ARTC and the relevant Aboriginal Parties in 2017 and 2018. These CHMPs have been approved under the Aboriginal Cultural Heritage Act 2003 (ACH Act).	Complete
Impacts on local amenity	Engagement with ICC and SRRC, issues including road re-alignments, crossing design, road use management, waste management, utilities and social impacts and benefits	Commenced during EIS phase and continuing
	Engagement with ICC and SRRC to identify and implement cooperative actions to offset impacts on amenity, local character and community cohesion, e.g. park or facility upgrades, entrance statements, community events	Planned for commencement in Q4 2020. Additional work to be undertaken once the contractor is on board.
	Council participation in tracking SIMP outcomes and developing adaptive management measures to address any emerging or changing needs.	Commencing during construction
Connectivity	Agreement with Councils that they have the right to approve road use management plans	Current/confirmed
Training and development opportunities	As part of Inland Rail Skills Academy partnerships, a Memorandum of Understanding (MOU) with CSQ, to: ▪ Provide information and advice on skills shortages to ARTC ▪ Work with ARTC to broker and enable training responses to address identified shortages ▪ Provide targeted construction skills training to Indigenous people, in cooperation with major contractors ▪ Support ARTC and potential contractors to develop and deliver targeted skills development in ICC and SRRC in line with SIMP commitments and Project needs ▪ Work with ARTC to deliver CSQ's Try a Trade' program to be initiated post approval	Current
	Inland Rail Skills Academy partnerships to enable: ▪ University scholarships with a focus on courses which facilitate STEM and regional development outcomes, e.g. engineering and project management, with a partnership with USQ to offer scholarships initiated in 2020. Scholarships are only available to applicants located in communities along the Inland Rail alignment in Queensland	Initiatives agreed as noted, to be commenced post approval Further initiatives to be identified during detailed design phase

Impact/benefit	Detail	Status
	▪ Partnership with University of Newcastle to deliver a STEM education program in high schools along the Project alignment, including linkages to USQ Science and Engineering Challenge for schools in SEQ ▪ Development of an online rail skills program available to school and university students in the region, including access to Inland Rail innovation, exposure to rail professions and micro-competencies being explored ▪ Business capacity building programs with small-to-medium enterprises to strengthen capacity in the region for both this Project and other future projects. Programs are being developed in cooperation with DSDTI and DESBT for delivery post approval ▪ Apprenticeships, traineeships and facilitation of industry accreditation to support employment into Inland Rail projects and other major regional industries, to be progressed when Project is approved ▪ Training programs focused on developing skills in rail operation and working in a rail corridor	
	Engagement with DATSIP and CSQ to identify specific training programs for Indigenous people, to be implemented as part of the Inland Rail Skills Academy	Current engagement
	Cooperation with RSIS project officers at ICC and SRRC to align Project training and development strategies provided as part of the Inland Rail Skills Academy with RSIS activities where possible, with a particular focus on transferable skills which will be retained in the region post construction.	Preliminary discussions held, engagement to be renewed during approval process
	Opportunities for alignment with the ICC-Jobs Queensland partnership and Council economic development plans	To be explored in detailed design phase
	Partnership between Yuggera Ugarapul People and Inland Rail to encourage Indigenous people to participate in CSQ's construction skills program prior to Inland Rail construction commencing	Discussions ongoing
	Potential for a partnership with QR to access experienced rail operators and maintenance staff as trainers in the Project region	To be explored post approval
Health and safety	Mental health partnerships with the Darling Downs and West Moreton PHN and the Brisbane South PHN to promote free local access to mental health services and provide resources and services to mitigate any increased demand caused by Inland Rail	Delivery commenced in 2019 and is ongoing
	Lifeline supported to deliver Lifeline's Community Connections program in the Project region to support community cohesion and resilience (delivered through PHN partnership)	Delivery commenced in 2019 and is ongoing
	Partnership with emergency services to build skills and cooperation in emergency responses	To be commenced post approval
	Potential for additional services to be included within the PHN partnership agreements	To be explored in detailed design phase
	Partnership with [Mates in Construction'[focused on supporting mental health outcomes of construction workers on the Project	Discussions in progress

Impact/benefit	Detail	Status
Local procurement	Engagement with DESBT to discuss existing and future needs for skills training in the Project region, and to identify DESBT programs which will support individuals and businesses to be ready for opportunities associated with supply of goods, services, materials and labour to Inland Rail Projects. Engagement with DSDTI and Industry Capability Network to collaborate on business capacity development in the Project region, to prepare small to medium businesses to participate in major projects, foster relationships between suppliers and help match suppliers to Inland Rail opportunities Working with DITRDC to align Project initiatives with DITRDC's regional development initiatives Working with the two Councils' RSIS coordinators to align skills training programs with RSIS priorities Information exchange regarding businesses within the Yuggera Ugarapul community and the business offerings and skills that contractors require, in support of the development of capacity building programs.	Agreements to cooperate initiated, to be implemented when the contractor is confirmed

8.2.4 Engagement responsibilities

During the remainder of the EIS phase, Inland Rail staff will continue to work with community members and other stakeholders to encourage access to the draft EIS and community participation in the public submission process (refer Section 8.2.5).

Both ARTC and the Principal contractor will maintain roles in community and stakeholder engagement during the detailed design and construction phases. **Table 8-6** summaries key responsibilities for each party by phase. Detailed communication and engagement measures are provided in Section 8.2.5.

Table 8-6: Engagement responsibilities

Phase	Engagement mechanism	Responsibility
Remainder of the EIS phase	Public notification, display and submission process	OCG
	Provide communications collateral (website, community updates, fact sheet) and opportunities for engagement (community information sessions, Council briefings and CRG meetings) to encourage access to the draft EIS and community participation in the public submission process	ARTC
	Review public submissions and provide further information/clarification in response to submissions in Final EIS	ARTC
Detailed design	Engage with Councils, Government agencies and other stakeholders identified in Section 8.5 to seek input to the Community Wellbeing Plan and AMP, continue implementation of partnerships and agreements, and initiate management measures with long-lead times	ARTC
	Write to directly affected landholders when Constructing Authority is appointed and seek landholder construction for ARTC to advise Constructing Authority of landholders' wishes identified in engagement to date	ARTC
	Undertake engagement with directly affected landholders regarding land acquisition process and compensation arrangements	Construction Authority
	Engage with Councils, Government agencies and other stakeholders identified in Section 8.5 to seek input to the Community Wellbeing Plan and AMP, continue implementation of partnerships and agreements, and initiate management measures with long-lead times	ARTC and Contractor

Phase	Engagement mechanism	Responsibility
	Cooperation with Traditional owners in cultural heritage management	ARTC and Contractor
Construction	Provide oversight and monitoring role to ensure consultation activities are delivered in accordance with EIS commitments and relevant approval conditions, including engagement of a Community and Stakeholder Engagement Manager and provision of Community Relations Monitor	ARTC
	Provide and implement a Communication and Stakeholder Engagement Management Plan (CSEMP) that: ▪ Demonstrates the ability to develop and maintain a proactive, collaborative and effective working relationship with the community, stakeholders and ARTC ▪ Complies with ARTC policies and procedures ▪ Includes a communication control plan for key proposed construction sites along the alignment ▪ Details business engagement mechanisms ▪ Describes the process for identifying and establish community initiatives, partnerships and legacy proposals	Contractor
	Establish and implement a complaints and enquiries process which is consistent with ARTC's Complaint Management Handling Procedure	Contractor with ARTC
	Engage with community members, community organisations and Councils to identify and establish community initiatives, partnerships and legacy proposals	Contractor
	Provide suitably qualified and experienced community and stakeholder liaison personnel to deliver the engagement program	Contractor
	Provide training for on-the-ground workforce in community engagement protocols and requirements	Contractor
	Meet with Councils and other stakeholders with respect to agreed management measures ()	Contractor
	Day-to-day stakeholder liaison relating to construction activities and management of environmental impacts	Contractor
	Establish and implement communication and information strategies about the construction program and activities including: ▪ Notification letters and/or email updates ▪ Public notices ▪ Factsheets addressing specific works, impacts or changes to conditions ▪ Website and SMS updates	Contractor with ARTC
	Establish and operate the CRG/s	Contractor with ARTC
	Provide and promote contact details for availability of a Project representative by phone 24/7	Contractor
	Cooperation with Traditional owners in cultural heritage management	ARTC and Contractor
	Partnerships as agreed with the relevant stakeholders (e.g. community organisations and training providers)	Contractor
	Inland Rail Skills Academy partnerships	ARTC
	Road/rail safety campaigns addressing the construction phase	Contractor

Phase	Engagement mechanism	Responsibility
	Documentation of stakeholder interactions and identification of issues to be addressed as part of implementing the Project's environmental management strategies	Contractor
	Provision of regular updates about the progress and status of the Project through the Inland Rail website	ARTC
	Free call telephone line	ARTC
	Road/rail safety campaigns addressing the operations phase	ARTC
	Email addresses to ensure community members have direct access to the Project team	ARTC and Contractor
	Reply-paid address for written correspondence from community members	ARTC
	Maintain the Project's webpage, including feedback mechanisms and an enquiry facility.	ARTC

Community Relations Monitor

ARTC will engage an independent, appropriately skilled and experienced entity as the Community Relations Monitor. The Community Relations Monitor will be engaged for the duration of the construction phase to:

- Review and provide advice to the Environmental Monitor on the Stakeholder and Community Engagement Plan (including the Complaint Management Handling Procedure)
- Attend meetings between the proponent and a directly affected person to consult on mitigation measures
- Be available to members of the community.

The roles and responsibilities of the Community Relations Monitor are set out in EIS Chapter 23: Draft Outline Environmental Management Plan.

Community Liaison Officer

A Community Liaison Officer will be provided during the construction period, to:

- Support communication between the contractor, nearby landholders, community members and other stakeholders
- Undertake engagement to support implementation of partnerships and community initiatives
- Provide information to the wider community in relation to construction programming, the nature of construction work, and impact mitigation measures
- Establish and maintain a process for receiving, recording and responding to complaints in relation to construction issues
- Support operation of the CRG.

Depending on the contractor's community and stakeholder engagement plans, one or more Community Liaison Officers may be provided, which will be determined by the Project during the detailed design phase.

8.2.5 Measures for ongoing engagement

ARTC's commitments to community and stakeholder engagement include:

- Provide clear and consistent information about the Inland Rail Program and its associated projects
- Actively engage and effectively communicate with stakeholders and the community to enable ARTC to design, construct and operate Inland Rail whilst minimising social impacts
- Build a dialogue between landholders and ARTC about land access and acquisition processes
- Work with local communities to understand their concerns and identify ways these could be addressed
- Provide support to stakeholders and communities that are facing change due to Inland Rail
- Identify emerging social issues that need to be addressed at the Project or Program level
- Maintain communication mechanisms throughout the detailed design, pre-construction and construction phases including a free call number, email addresses to ensure community members have direct access to the Project team, a reply-paid address for written correspondence, and the Project's webpage, including feedback mechanisms and an enquiry facility

Engagement measures to be utilised pre--approval and post-approval are described below and detailed in **Table 8-7**.

Proposed communication tools and activities

During the draft EIS display period, ARTC will communicate the findings of the draft EIS and encourage community engagement in the display process using the following tools:

- ARTC website—consultation locations and link to submission page
- Social media posts—submission release date
- E-newsletter to 350+ stakeholders in the Project database
- Community information sessions to encourage community feedback
- Distribution of the Office of Coordinator-General's 'Have your say' factsheets for public consultation.

During the detailed design, pre-construction and construction phases, the Project will utilise the following communication tools and activities:

- Provision of regular updates about the progress and status of the Project by ARTC through the Inland Rail website
- Notification letters and/or email updates prior to e.g. prior to commencement of construction, piling, blasting, disruption of residential, business or public access, disruption of utility service. changes in traffic or transport network conditions, road closures and diversions, or modification of pedestrian routes, cycleways, train stations and bus stops
- Public notices regarding e.g. changes to traffic conditions and high impact work or work packages, based on predictive noise, dust and/or vibration modelling by the Contractor
- The availability of a Project representative by phone 24/7
- A free call telephone line
- Factsheets addressing specific works, impacts or changes to conditions
- Website and SMS updates
- Road/rail safety campaigns addressing the operations phase
- Stakeholder meetings and briefings as discussed below.

Pre-approval engagement

Inland Rail is committed to supporting stakeholder awareness of the draft EIS and encouraging community members to participate in the draft EIS submission process conducted by DSDTI. The Project will support the submission process by undertaking the following activities:

- Providing a link on ARTC's website to the Office of the Coordinator-General website where the EIS is available
- Providing information about the public submission period and submission requirements on ARTC's website
- Producing and distributing a letter to publicise the release of the draft EIS, providing information on the public submission process and how to make submissions
- Emailing key stakeholders registered on the Project's database about the draft EIS and submission period
- Conducting agency briefings, CCC meetings and community information sessions to present findings of the draft EIS.

Inland Rail personnel will also meet with ICC and SRRC to discuss the draft EIS findings including proposed management measures outlined in the draft SIMP as described in Section 8.1.5, and seek further inputs on community initiatives which should be considered as part of the Project's Community Wellbeing Plan (refer Section 8.5.7)

Following completion of the public display period, all stakeholder and community feedback will be reviewed and addressed in the final EIS documentation.

The decision by the Coordinator-General about whether to approve the Project will be made public via Department of State Development, Infrastructure and Planning's (DSDIP) and ARTC Inland Rail's websites.

Post-approval engagement

The community and stakeholder engagement actions outlined in **Table 8-7** include details of the following engagement strategies to be employed during the Project's detailed design, pre-construction and construction phases:

- Engagement with directly affected landholders to confirm mitigation of property-specific impacts, and with residents living near the Project footprint to enable them to understand potential impacts on household amenity and how to resolve any emerging issues with the Project
- Provision of community information and engagement opportunities (including one or more CRGs) for residents of potentially affected communities
- Cooperation with Traditional Owners and Indigenous community members to support cultural heritage management and enable their access to Project employment and business supply opportunities
- Engagement and cooperation with SRRC and ICC in the adaptive management of environmental and social impacts including management measures for impacts on community facilities, amenity, sense of place and community cohesion
- Engagement with businesses that may be negatively affected to optimise and monitor impact management measures, and actions to increase local businesses' opportunities for involvement in Project supply arrangements

- Engagement with Government agencies and community organisations to confirm the detail of mitigation measures for impacts on social infrastructure and develop and implement cooperative arrangements.

Engagement measures detailed in **Table 8-7** encompass all community and stakeholder engagement actions provided in the SIMP. Engagement actions that support actions provided in other SIMP action plans are also noted in Sections 8.3 to 8.6 and address:

- Local high schools and training providers to develop training pathways for Project construction and operation (refer Section 8.3)
- Accommodation providers and Councils regarding management of any workforce accommodation requirements (refer Section 8.4)
- Council, Government agencies and community organisations regarding mitigation of impacts on community wellbeing and enhancement of Project benefits for local communities (refer Section 8.5)
- Businesses regarding specific impacts and with tourism associations and operators regarding major event schedules and support for the promotion of local tourism and capacity building programs (refer Section 8.6).

The Community and Stakeholder Engagement Plan will be reviewed annually in consultation with the CRGs during the construction phase and updated as required.

ARTC will deliver these actions and/or require its contractor to deliver the actions. Performance measures which will assist the Project to track the delivery and effectiveness of mitigation measures are provided in **Table 8-13**.

Table 8-7: Community and stakeholder engagement measures

Community engagement actions	
Stakeholders	**Landholders and tenants in and near Project footprint i.e. within 1 km**
Strategy	Engage with directly affected landholders to confirm mitigation of property-specific impacts, and with residents living near the Project footprint, to enable them to understand potential impacts on household amenity and how to resolve any emerging issues with the Project
Impacts addressed	▪ Disruption of property use and amenity ▪ Impacts on property access, access to water or connectivity ▪ Potential exacerbation of disadvantage ▪ Uncertainty and stress
Timing	**Actions**
Detailed design phase	Maintain the availability of the EIS, information about EIS approval conditions, and information about ARTC's compliance with conditions on the Project's website, to reduce the likelihood of negative perceptions about the amenity of properties or near the disturbance footprint
	Meet with the owners of directly affected and adjacent properties to confirm property-specific measures to be implemented during pre-construction or construction as relevant, including as relevant: ▪ Property access arrangements ▪ Appropriate access and egress solutions incorporated into the detailed design to enable movements across the rail corridor ▪ Changes to road access

Community engagement actions	
	▪ Surface water diversion ▪ Any noise mitigation measures where these are triggered ▪ Impacts on agricultural uses including farm infrastructure ▪ Communication protocols
	In consultation with the Constructing Authority and affected landholders, confirm mitigation arrangements for direct impacts on groundwater bores
	Provide a Community Liaison Officer to work closely with residents whose properties will be acquired and affected DTMR tenants to reduce stress related to uncertainty about impacts and the timing of acquisition
	Provide appropriate information and assistance to landholders during the land resumption process to reduce uncertainties and support their adaptation to changes, including ▪ Through consultation, identify households where property severance or other changes to amenity may cause distress to residents, ensure their access to communication and complaints mechanisms, and provide referral to support services where required ▪ In consultation with the PHNs, extend the mental health partnership to include provision of services to assist residents (landholders and tenants) whose homes would be removed from the corridor to access alternative accommodation and support services ▪ With due regard to privacy and confidentiality, provide consultation data regarding households who may require assistance to find affordable housing to DTMR and DHPW, to enable a collaborative response and reduce consultation fatigue ▪ Maintain quarterly communication with residents whose properties would be acquired (or as agreed) to keep them updated and ensure their concerns are considered in developing the CEMP
	Meet with people whose properties may experience noise exceedances, to ensure the potential for impacts on amenity is clearly explained, and where relevant, to obtain residents' inputs to the development of property-specific mitigation strategies
	Advise interested landholders of the solutions developed in consultation with DTMR and ICC and SRRC with respect to Middle Road, Paynes Road and Washpool Road by letter/factsheet, invite their feedback, and consider their feedback in finalising the detailed design for these roads
	Provide information to communities about how noise, dust and traffic delays from the Project will be minimised, and consider community feedback about the effectiveness of measures in reviewing the CEMP
Pre-construction phase	Implement (as relevant to the pre-construction phase) agreements with landholders affected by property acquisition, temporary or permanent use of land or noise exceedances regarding property-specific measures as outlined in the detailed design phase
	Establish and promote the complaints management handling procedure
	Consult via letter and through individual means as requested with all households adjacent to and within 250 m of laydown areas and bridge construction sites, and above the tunnel construction areas to: ▪ Advise the measures provided in the Draft OEMP ▪ Identify any specific household concerns (e.g. the presence of children or seniors) ▪ Provide advance warning of the construction schedule and sequence (e.g. how long specific activities will take), and any disruptions to access or services

Community engagement actions	
	▪ Describe the nature and causes of noise and vibration ▪ Advise on how long construction work will be heard or seen for each property ▪ Provide 24-hour contact details for construction managers
	Communicate the Project's land access protocols, construction hours, Code of Conduct and complaints mechanism to residents adjoining the temporary disturbance footprint
	In advance of the commencement of pre-construction works, provide information to landholders and local communities about: ▪ The construction program and activities ▪ The timing, duration and predicted impacts of the works with regard to homes, businesses and community facilities ▪ The predicted effects of construction works on road, rail and pedestrian and cycle network operations ▪ How to contact the Project ▪ The complaints management system
	Notify directly affected and adjacent landholders, residents, businesses, Councils and other stakeholders before pre-construction work starts in their vicinity and provide regular updates on construction activities and progress, through signage, the local media and other forms of communication such as emails and letters
	Maintain regular engagement with landholders who are adjacent to the rail corridor and areas used for construction to share information and identify any issues arising during pre-construction activities, including access to email correspondence, a free-call line and meetings on request
	Provide advance notice e.g. email. letter, SMS or public notices of any significant dust generating activities
Construction phase	Provide monthly advance notices and updates to directly affected landholders (where they remain in local communities) and adjacent landholders regarding construction activities, impacts and mitigation measures
	Implement (as relevant to the construction phase) agreements with landholders affected by property acquisition, temporary or permanent use of land or noise exceedances regarding property-specific measures
	Maintain regular engagement with directly affected and landholders who are adjacent to the temporary disturbance footprint to enable identification of any issues arising and enable adaptive management of impacts such as property access by Project personnel, disruptions to property accesses, construction noise or dust
	Initiate and maintain communication and co-operation with local landholders during flood alert and recovery periods to support readiness and cooperation
	Engage an independent, appropriately skilled and experienced entity as the Community Relations Monitor
	Provide access to the Community Relations Monitor and Community Liaison Officer and promote their availability through Project communications such as newsletters, websites, fact sheets and emails

Community engagement actions	
Stakeholders:	**Other residents and businesses in potentially impacted communities**
Strategy	Provision of community information and engagement opportunities (including one or more CRGs) for residents of potentially affected communities
Impacts addressed	▪ Impacts on the amenity and character of rural areas due to construction works ▪ Disruptions to the traffic network ▪ Community safety ▪ Employment and business opportunities ▪ Impacts on community cohesion
Timing	**Actions**
Detailed design phase	Establish the CRG (see Section 8.2.6)
	Establish consultative arrangements (e.g. newsletters, project email, 24-hour contact details for construction representative) that are accessible and promoted to all residents within 1 km of the Project alignment and in all potentially impacted communities, including a complaints resolution procedure
	Ensure Project communications are accessible to people without internet access, people with low levels of education and people with limited skills in English (to counite until the end of construction)
	Provide information to the community about how noise and dust from the Project's construction and operation will be minimised e.g. via a fact sheet
Pre-construction and construction phase	A Community Liaison Officer will be provided, and contact details made available in all potentially impacted communities
	Provide and promote of a complaints and feedback mechanism accessible to all local stakeholders, including the ability to resolve complaints regarding construction works or workforce behaviour
	Develop an incident notification and reporting process, including providing information to the community if an environmental incident occurs
	Provide a clear and efficient process for local people to seek information about employment opportunities and register their interest including via employment portals and through local employment agencies
	Update the Project's webpage and other locally available communication materials to include the Project's CEMP and SIMP, quarterly construction updates, detailed explanations of upcoming activities, workforce ramp-up and stakeholder engagement mechanisms, and complaints and feedback mechanisms, and annual SIMP reports when available
	Provide information which is accessible to those without internet access regarding the construction timeframe and activities, employment opportunities and how to express interest in employment, contracting or supply opportunities
	Provide information to SRRC and community organisations including Bushwalkers of SEQ, Beaudesert Trail Horse Riders, Ipswich and District Trail Riders Club and the Beaudesert Bushwalkers to enable trail users to re-plan their routes in areas where horse trails are affected
Construction phase	Provide regular (at least quarterly) updates to potentially impacted communities including detailed explanations of upcoming activities, workforce ramp-up and stakeholder engagement mechanisms

Community engagement actions	
	Develop a travel demand management community information campaign to inform the public on the proposed construction works and potential effect on local road networks, to allow them to plan their travel
	Maintain publicly available information (via websites, fact sheets and project updates) and availability of feedback mechanisms including phone, email and web-based facilities regarding: ▪ The construction schedule ▪ Impacts that may be experienced e.g. noise or traffic disruption, and how the Project is mitigating those impacts ▪ Road safety measures ▪ How to communicate with the Project and the contractor ▪ 24 hour/7-day contact details for Project representatives
	Maintain provision of the Community Relations Monitor
	Implement communication strategies to ensure stakeholders know about construction traffic routes, peak construction periods, the Project's workforce conduct policies, and how to contact Project personnel in the event of any concerns regarding safety during construction
	Ahead of the operational phase: ▪ Provide timely and well-targeted information about potential traffic delays during Project operations, including an indicative schedule of freight train movements, and strategies that ARTC employs to reduce traffic delays ▪ Develop a traffic safety education program which has a clear focus on interactions between the rail corridor, roads and other access tracks, and interactions with rural roads and rural traffic ▪ Renew contact with schools in Peak Crossing and Rosewood prior to operations commencing, to identify any concerns regarding travel delays, and any strategies which could feasibly be applied to reduce inconvenience or other impacts of traffic delays at level crossings
Stakeholders:	**Traditional Owners and other Indigenous community members**
Strategy	Cooperation with Traditional Owners and Indigenous community members to support cultural heritage management and enable their access to Project employment and business supply opportunities
Impacts addressed	▪ Impacts on cultural landscapes ▪ Training and Employment opportunities ▪ Business opportunities
Timing	**Actions**
Detailed design phase	ARTC's Indigenous Participation Advisor is working with Traditional Owner groups and local communities to support their consideration of Project opportunities, which will continue during the detailed design phase, with a particular focus on business and employment opportunities.
	Plan with Yuggera Ugarapul People for cultural awareness tours for Project personnel (in progress during the EIS phase)

Community engagement actions	
	Consult with Yuggera Ugarapul People, Jagera Daran People, CSQ, DATSIP and training providers, ICC and SRRC to identify potential opportunities for early skilling programs for Indigenous worker (in progress during the EIS phase)
	Encourage Yuggera Ugarapul People to express their interest in the Indigenous Ranger program to DES
	Enable meetings between Traditional Owner group board representatives and the Contractor, once appointed, regarding cultural heritage management, cultural awareness, training, targeted training initiatives, mentorship for Indigenous workers, business supply opportunities, and any need for capacity building with Indigenous businesses
	Communicate with Traditional Owner groups regarding the range of business opportunities which will be available during construction, the availability of Indigenous businesses to participate and the types of capacity building programs that Indigenous businesses may need to prepare for involvement in the Project supply chain
	Work with Traditional Owner groups to identify existing business capacity within the Yuggera Ugarapul and Jagera Daran communities and help them to identify business capacity building programs to be supported by ARTC, DATSIP and/or DITRDC, to be continued during pre-construction and if required, construction phases
Pre-construction phase	Involve Yuggera Ugarapul People in cultural heritage surveys for any proposed new quarry sites
	Indigenous cultural heritage values and Project impacts to these values will be managed under approved CHMP. ARTC will continue regular engagement with Yuggera Ugarapul People to enable opportunities to provide input regarding cultural values
	Implement Indigenous business capacity building programs in cooperation with DATSIP, DSDTI and Traditional Owners
	Implement Inland Rail Skills Academy programs (in cooperation with CSQ others as identified in future Project phases) targeting Indigenous training and development for construction works, cross-over skills (to other projects or industries) and business readiness to supply the Project
Construction phase	In cooperation with Yuggera Ugarapul People, provide cultural awareness training in relation to Yuggera Ugarapul people's values, workplace diversity and cultural heritage management requirements to Project personnel
	Continue to engage with Yuggera Ugarapul People to provide access to information about business and skills requirements and the availability of targeted programs for training and business development
	Maintain regular cooperation with Traditional Owners in accordance with the terms of the CHMPs
	Continue engagement and training programs with Indigenous community members to ensure operational roles are considered by Indigenous people
	Continue to cooperate with DESBT, DITRDC and local and Indigenous businesses to: ▪ Build businesses' capacity to participate in the Project's supply chain through business development, mentoring and pre-qualification projects ▪ Support Indigenous businesses to ensure they are prepared for and provided with opportunities to participate

Community engagement actions	
Stakeholders:	**ICC and SRRC**
Strategy	Cooperation with SRRC and ICC in the adaptive management of environmental and social impacts including management measures for impacts on community facilities, amenity, sense of place and community cohesion
Impacts addressed	▪ Impacts on amenity and local character, including noise ▪ Social opportunities ▪ Training opportunities ▪ Community wellbeing ▪ Connectivity ▪ Traffic safety
Timing	**Actions**
Detailed design phase	Continue regular meetings with SRRC and ICC on the Project's schedule, EIS findings and mitigation measures and in particular: ▪ Alignment of Project initiatives with Regional Skills Initiatives Strategy projects ▪ EIS findings regarding the Boonah to Ipswich Trail ▪ The construction schedule, potential impacts and mitigation measures for Council assets ▪ Identification of community projects or partnerships to maximise social interaction ▪ Shared initiatives which could offset impacts on local character and sense of place ▪ Emerging community needs (e.g. COVID-19 community recovery, activation of community organisations to support cohesion) which could be addressed through targeted funding to community organisations in each LGA
	Communicate with ICC and SRRC about EIS results of relevance to rail operations (e.g. noise impacts and road network operation) to support their consideration of any development control measures required to protect the amenity and liveability of residents in areas which are planned for future urban growth
	Consult with ICC and SRRC to identify issues which should be addressed in the AMP
	In consultation with the two Councils, prepare a Community Wellbeing Plan to provide a framework for cooperation with key stakeholders to implement mitigation measures addressing impacts on quality of life as the result of Project impacts on amenity, character, cohesion or connectivity (refer Section 8.6.5)
	Consult with ICC (and if advised by ICC, other stakeholders) to forecast the Ipswich Motorsports Precinct's event schedule during the construction phase, and identify feasible measures such as scheduling of noisy works or works which would disrupt access to the Precinct during major events
	Discuss the use of Champion's Way and the Cunningham Highway with ICC and DTMR to inform the Project's TMP
	Consult with Ipswich City Council regarding any Council-planned works to upgrade facilities at the Purga Nature Reserve and the need for initiatives such as increased interpretive signage
Pre-construction phase	Provide advice to Councils about construction traffic routes, and seek their feedback in finalising the TMP
	Meet with ICC and SRRC to advise the schedule and program for pre-construction, including:

Community engagement actions	
	▪ When and where specific works would occur ▪ The timing for commencement of works in road reserves and utility corridors ▪ The schedule for implementation for traffic detours
	Consult with ICC (and if advised by ICC, other stakeholders) to forecast the Ipswich Motorsport Precinct's event schedule during the construction phase, and identify feasible measures such as scheduling of noisy works or works which would disrupt access to the Precinct to avoid conflicting with major events, for inclusion in the CEMP. Consultation between the Project and ICC will be maintained throughout the period in which construction works are occurring within 500 m of the Ipswich Motorsport Precinct
	Provide an update to ICC and SRRC on the implementation of the Community Wellbeing Plan and AMP, and seek their feedback
Construction phase	Meet with ICC and SRRC at least six monthly to: ▪ Review progress with the Community Wellbeing Plan and seek their feedback on the progress of community initiatives ▪ Coordinate the implementation of initiatives shared between the Project and Councils e.g. place-making, training or tourism marketing initiatives ▪ Seek Council inputs into monitoring the effectiveness of the AMP ▪ Seek Council's feedback and inputs regarding the effectiveness of the Project's community and stakeholder engagement strategies ▪ Provide advance notice of the works schedule including the construction program, potential impacts of construction works, road closures and traffic diversions, disruption to pathway networks, and work in utility corridors ▪ Monitor the effectiveness of management measures addressing road safety and road network management issues ▪ Discuss other issues and any need for corrective actions as they arise
	Invite Council's review of annual SIMP reports and participation in annual SIMP reviews
Stakeholders:	**Government and community service organisations**
Strategy:	Engagement with Government agencies and community organisations to confirm the detail of mitigation measures for impacts on social infrastructure and develop and implement cooperative arrangements.
Impacts and benefits addressed	▪ Stress, anxiety and mental health ▪ Demands on social infrastructure ▪ Community safety (e.g. traffic safety and emergency service capacity) ▪ Contribution to quality of life and community wellbeing
Timing	**Actions**
Detailed design phase	Meet with the Department of Education and all schools in Rosewood and Peak Crossing to: ▪ Describe the construction schedule and the nature of road-rail interface treatments ▪ Identify any concerns regarding changes to road access which may affect students' routes to school or any impacts on road or pedestrian safety, and include relevant actions and accountabilities in the Construction Management TMP ▪ Seek a meeting with the School Principals and P&Cs to provide a Project update and explain how construction traffic will be managed

Community engagement actions	
	▪ Confirm all relevant school bus services and contact details for their operators, and consult school bus operators about measures to be included in the TMP, including consideration to limiting construction traffic on school bus routes during pick-up and set-down times on school days ▪ Identify any specific considerations (e.g. off-campus activities) which should be considered in the Project's TMP ▪ Confirm Project contact details for the contractor
	Provide an update on Project design, EIS findings and the construction program to Department of Education, Queensland Health, DHPW, QPS, QAS and QFES
	Meet with Government agencies to confirm the detail of mitigation measures for impacts on social infrastructure and joint response arrangements with: ▪ Department of Education e.g. with respect to safety measures for construction traffic routes (as above) using school access routes ▪ Queensland Health, e.g. forecasting the workforce ramp-up and agreeing the schedule for communication with the Project ▪ QPS, QAS and QFES, e.g. seeking input to the Emergency Response Plan and progressing agreements for cooperation on emergency responses ▪ DCDSS, e.g. in regard to emerging community needs (e.g. COVID-19 community recovery and monitoring of demands for community support services DHPW, to ensure that they are aware of any support needed by DTMR tenants and have an opportunity to provide input to the AMP
	When the detailed design including road network changes and construction traffic routes are confirmed with DTMR and the two Councils, undertake consultation with all relevant bus operators identified through consultation with Department of Education/DTMR to identify any concerns regarding changes to school bus routes or traffic management, and identify any issues which need to be considered as part of the Project's TMP, e.g. limiting construction traffic on school bus routes during pick-up and set-down times
	Cooperate with DESBT, Department of Education, local high schools and training providers, to: ▪ Develop training pathways for employment in Project construction and operation ▪ Identify young people and groups of young people who could be supported to access training for potential employment in the Project's operations
	Engage proactively with Queensland Health and QPS to ensure they are well informed about the Project and are aware of any additional resources that may be available through the Project to support mental health in affected communities
	Consult QFES in detailing the mitigation measures regarding fire trails, firefighting and a cooperative response to any fire risks affecting the EIS investigation corridor
	Confirm arrangements with QPS, QAS and QFES to ensure effective communication and cooperation throughout the construction phase, including measures to mitigate impacts on emergency service response times during construction and operation (e.g. direct communication with construction managers)
	Continue cooperation with DITRDC, DATSIP and CSQ to develop training programs to be delivered through the Inland Rail Skills Academy to equip local people for Project employment

Community engagement actions	
	Maintain mental health partnerships with the Darling Downs and West Moreton PHN and the Brisbane South PHN to support these residents and others who may experience stress and anxiety in relation to the Project and regularly review the resources available and the adequacy of services in relation to Project-related demands on mental health services.
Pre-construction phase	Communicate with Queensland Health to ensure hospital and health services are aware of the construction program and workforce ramp up to enable planning for any minor upgrades to services which may be required.
	Ensure all Queensland Government agencies are registered as stakeholders to receive Project updates, fact sheets and newsletters
	Provide early advice to the QPS, QAS QFES and SES on the workforce ramp-up, schedule and location for construction activities and changes to the road network
	Meet with the QPS, QFES and QAS to update advice on the Project's workforce ramp-up, review co-operative arrangements and ensure any safety or service access issues are identified and addressed
	Through consultation with DCDSS prior to construction commencing, and annually during construction, identify any Project-related increase in demand for community services, and if stresses on services are identified, participate in a cooperative response to community needs between DCDSS, ARTC and community organisations
	Consult with Department of Education to confirm their comfort with TMP measures regarding schools in Rosewood and Peak Crossing
	Communicate with all schools, health facilities and community halls and centres in the potentially impacted communities regarding the construction program, and provide regular updates about road closures and roadworks
	Prior to the commencement of Project operations, engage with the PHNs and Queensland Health to gauge the need for any ongoing support for mental health services during the operational period. ARTC will establish arrangements with QPS, QAS and QFES to enable cooperative responses to any incidents e.g. rail accidents, road-rail or suicides during rail operation
	Provide information on train schedules which would help emergency services responders to navigate access arrangements during operations
	Develop tailored and targeted rail and road safety programs for delivery during construction to local schools and communities in the Project region
Construction	Meet with DCDSS prior to construction commencing, and annually during construction, to identify any Project-related increase in demand for community services, and if stresses on services are identified, participate in a cooperative response to community needs between DCDSS, ARTC and community organisations
	Meet with Department of Education, QPS, QFES, QAS, SES and Queensland Health to provide an update on the construction program, road network disruptions, the TMP, anticipated impacts and community engagement mechanisms, and confirm the schedule for meetings with agencies during for the construction phase
	Provide regular (at least six monthly) updates to the Department of Education, QPS, QAS, QFES, SES and Queensland Health on the workforce ramp-up, schedule and location for construction activities, and changes to the road network, and seek feedback on traffic management

Community engagement actions	
	Develop a protocol between ARTC and emergency service providers, defining appropriate and coordinated responses and communication in the event of emergencies during operations
	Investigate the need for joint training and response exercises with QPS, QAS, and QFES to build capacity for Project- associated incident management during operation
Stakeholders:	**Businesses**
Strategy	Engagement with businesses that may be negatively affected to optimise and monitor impact management measures, and increase local businesses' opportunities for involvement in Project supply arrangements
Impacts addressed	▪ Impacts on nearby event/tourism businesses ▪ Impacts on agricultural businesses ▪ Opportunities to supply the Project
Timing	**Actions**
Detailed design phase	Hold a workshop or other forum with local Chambers of Commerce, DSDTI, DATSIP and DESBT to discuss gaps in local business' capacity to work with major projects, e.g. safety management, environmental compliance, working with construction management companies, or specific skills, and discuss and confirm responsibilities for capacity building programs, which may include business forums such as 'Meet the Buyer' or 'Procurement Opportunity updates, skills development workshops or training courses
	Liaise with the following stakeholders to locate specific business capacities of relevance to the Project's supply chain for inclusion in the Project's register of potential suppliers: ▪ DITRDC ▪ RDA ▪ ICC ▪ SRRC ▪ Chambers of Commerce in the Ipswich and Scenic Rim LGAs
	Meet with the IRCEC and Flinders Peak Winery to: ▪ Describe the construction schedule and the nature and location of works ▪ Communicate EIS findings on the potential for construction noise exceedances on accommodation whilst works are in the vicinity ▪ Describe measures to be considered in the detailed design, construction methodology or CEMP to minimise impacts on the properties and their surrounds ▪ Identify the need for any additional mitigation measures, if necessary and feasible, to mitigate noise or visual amenity impacts on these properties during construction could be considered as part of the CEMP or construction methodology ▪ Identify any impacts on road access to these properties and measures to ensure access to the properties ▪ Establish communication between them and the Contractor
	Communicate with agricultural landholders (including crop famers, graziers and poultry farmers) in and adjacent to the Project footprint, in writing, and via meetings on request, to: ▪ Describe the construction schedule and the nature and location of works ▪ Explain the land resumption process to landholders whose properties would be acquired and provide contact details for the Constructing Authority

Community engagement actions	
	▪ Explain the result of EIS studies on noise and dust, as relevant to specific holdings or businesses ▪ Describe measures to be considered in the detailed design, construction methodology or CEMP to minimise impacts on the movement of stock and produce, water access, or infrastructure/equipment on agricultural properties and seek feedback ▪ Describe measures which ensure an appropriate level of access is maintained for agricultural businesses across and between properties directly affected by the Project ▪ Propose a schedule for meetings between directly affected landholders and the Project during the pre-construction and construction phases
	Consult (via a business forum or workshop) with tourism-related businesses (e.g. wineries, accommodation facilities, hotels, farm stays, restaurants, cafes and specialty shops) located within 5 km of the Project to: ▪ Explain the Draft Outline Environmental Management Plan TMP and CEMP provisions and accept feedback on measures of relevance to tourism and related businesses ▪ Identify any additional, feasible strategies which would reduce or offset impacts on connectivity or businesses' amenity during construction and/or operation for inclusion in the CMP or TMP ▪ Discuss support for the promotion of local tourism ▪ Share information about opportunities for businesses to supply the Project
	Work with RDA, DSDTI, DATSIP, ICC, SRRC and the Ipswich and Scenic Rim Chambers of Commerce, to encourage relevant supply chain development, especially for Indigenous businesses, including the delivery of workshops and/or online training with businesses aimed at building their capacity for involvement in major project construction and associated services and projects, including communication of pre-qualification requirements
	In developing the AMP, consult with the Scenic Rim Tourism Association and the Ipswich Tourism Operators Network to confirm peak demand periods (noting these may change from year to year in response to major event schedules) and seasonal demands on tourism accommodation, to minimise the potential for the impacts of Project works to affect major events major event and avoid Project use of accommodation which may displace tourists or events visitors
	Establish consultative arrangements with Scenic Rim and Ipswich Chambers of Commerce to support monitoring of any issues identified in relation to labour draw
Pre-construction phase	Cooperate with tourism business owners, Scenic Rim Tourism Association, Ipswich Tourism Operators Network, ICC and SRRC, to develop and implement a strategy to mitigate impacts on tourism values, which may include support for promotional and marketing campaigns during the construction period and/or support for placemaking projects
	Implement measures, working with Scenic Rim Tourism Association, the Ipswich Tourist Operators Network, ICC and SRRC, to mitigate any impacts on tourism during the pre-construction stage (e.g. changes to scenic amenity) through support for promotional and marketing campaigns
	Facilitate the delivery of workshops with businesses including Indigenous businesses aimed at building their capacity for involvement in major project construction and associated services, in Scenic Rim and Ipswich locations

Community engagement actions	
	Provide regular updates via emails to local and regional businesses to ensure they have access to current information about the Project
	In consultation with landholders, ensure an appropriate level of access is maintained for agricultural businesses across and between properties affected by the Project, and to the roads which link them to markets during the pre-construction period
Construction phase	Maintain regular engagement with landholders and business owners adjacent to the temporary disturbance footprint (at least quarterly during the first year of construction or as agreed with landholders) to monitor the effectiveness of environmental and social impact mitigation measures
	Provide an update on the construction schedule, works, nature of impacts and mitigation measures to IRCEC and Flinders Peak Winery at least one month prior to the commencement of construction works which may result in impacts on these properties
	Implement business capacity building programs agreed with RDA, DSDTI, DATSIP, ICC, SRRC and the Ipswich and Scenic Rim Chambers of Commerce in the detailed design phase, as part of the Inland Rail Skills Academy
	Provide regular Project updates which forecast road works, road realignments and closures, and explain alternative routes, to businesses, agricultural landholders and potentially impacted communities (including residents of rural localities)
	Maintain consultation with ICC and any identified stakeholders within the Ipswich Motorsports Precinct throughout the period in which construction works are occurring within 500 m of the Ipswich Motorsports Precinct or affecting Champion's Way or the Cunningham Highway of this vicinity, to review the effectiveness of mitigation measure and if necessary, develop corrective measures
	Implement measures agreed with Scenic Rim Tourism Association, Ipswich Tourist Operators Network and the Ipswich and Scenic Rim Councils to mitigate impacts on tourism during the construction stage
	Through the Project's CRG, provide feedback to community members on the implementation of proposed measures to reduce the visual impact of rail infrastructure during operation, and seek their feedback
	Promote Government services and programs which are available to businesses considering investment in projects related to Inland Rail

8.2.6 Community Reference Group/s

The contractor will facilitate the operation of one or more CRGs during the construction phase, replacing the CCCs utilised during the EIS and post-approval phases. CRGs may be formed on a Project basis or on a locality basis (e.g. one in the Ipswich LGA and one in the Scenic Rim LGA). This will be finalised once the contractor has been appointed.

The CRG(s) will meet regularly until completion of construction to provide timely, open advice about the Project, enable representations of community issues to ARTC, and facilitate community review of the effectiveness of SIMP measures. The CRG(s) will:

- Provide a channel to inform communities about the construction and operational phases of the Project
- Provide feedback to ARTC about construction plans and programs
- Receive updates on SIMP implementation, and enable feedback on mitigation and enhancement measures which need to be reconsidered or refined

- Enable CRG members to participate in monitoring the effectiveness of social and environmental management measures (refer Section 8.7).

The contractor will be required to ensure community members and other stakeholders have access to CRG proceedings by providing endorsed copies of minutes and other meeting records for the public record and for display on the Project's webpage.

The need for a CRG for any part of the operational period will be reviewed in cooperation with the OCG at the completion of construction.

8.2.7 Community and stakeholder engagement during operation

Prior to the completion of the construction phase, a Community and Stakeholder Engagement Plan will be developed for the commissioning and operational phases, which will include:

- Mechanisms for communication and co-operation with landholders and residents who are adjacent to the Project or who may experience impacts such as noise, vibration or travel delays
- Promotion of operational employment and supply opportunities to local and regional residents, including provision of information about supply opportunities on the Inland Rail portal
- Measures to identify and remediate issues such as excessive noise or dust deposition
- Promotion of operational employment and supply opportunities to local and regional residents
- Community updates on maintenance and track works
- Emergency services' access to a timetable of train movements
- Complaints and feedback mechanisms.

The Community and Stakeholder Engagement Plan for operation will be reviewed in Year 3 of operations to determine any need for revision of the Plan.

8.2.8 Complaints management

The Inland Rail Complaint Management Handling Procedure applies to all employees of ARTC Inland Rail and to all contractors and site visitors. The aim of the procedure is to ensure that complaints are dealt with efficiently and effectively, and that stakeholders have confidence in the organisations complaint system.

A complaint is an expression of dissatisfaction about the policies, operations, activities and projects of ARTC Inland Rail or its staff. Complaints can be lodged by any member of the public, landholder or another stakeholder. Information on where and how to lodge a complaint is readily available through established ARTC Inland Rail communication channels.

ARTC Inland Rail ensures the complaint process is flexible and no one is excluded from making a complaint. Where necessary, ARTC Inland Rail staff will assist those stakeholders requiring assistance to lodge a complaint.

The Complaint Management Handling Procedure includes the following steps:

- Acknowledge: upon receiving a complaint, ARTC Inland Rail staff will take reasonable steps to ensure that the complaint is properly understood and seek clarification or additional information from the complainant where required. ARTC Inland Rail will report the complaint and forward it to the relevant area for appropriate action or information. Where sufficient stakeholder contact details have been provided all complaints will receive formal written acknowledgment of complaint receipt within two business days.

- Assessment: A preliminary assessment of the complaint is conducted to determine whether the complaint is one which ARTC can resolve, or needs to be referred to another appropriate agency or party (for example a local council or government agency)
- Planning: Complaints that are straightforward can often be resolved on first contact. If this is not the case and the complaint requires investigation, a planning process will be undertaken to identify what is to be investigated, the steps involved in investigation, the remedy the complainant is seeking and other possible remedies
- Investigation: ARTC will investigate the complaint, based on the principles of impartiality, confidentiality and transparency
- Response: the progress of the complaint will be monitored and communicated to the complainant, until the outcome has been communicated to the complainant
- Follow-up: complainants will be offered the opportunity to seek review of how their complaint was handled and resolved. If a complainant is dissatisfied with an investigator's findings or decision, a review will be carried out by an ARTC officer who has not been involved in the matter. If the complainant is still dissatisfied with the outcome, they will be advised of independent review bodies or mediation mechanisms that are available.

ARTC Inland Rail will regularly monitor the quality and effectiveness of the complaints management system and revise relevant components where appropriate, based on feedback from internal and external sources.

ARTC's stakeholder management system will be used to record details of complaints and their resolution for issues analysis and reporting purposes.

8.2.9 Monitoring and reporting

Table 8-8 provides the framework for monitoring and reporting on community and stakeholder engagement including desired outcomes, performance measures, monitoring mechanisms, and the timing for monitoring and reporting during the Project's construction. Further information regarding SIMP monitoring, reporting and review is provided in Section 8.7.

The Project's Community and Stakeholder Engagement Plan will be reviewed annually during construction in consultation with Councils and CRG/s, and updated as required.

Table 8-8: Community and stakeholder engagement monitoring

Outcomes	Performance measures	Mechanism	Timing
Co-operative and respectful relationships exist between ARTC, the contractor, construction personnel and community members, and facilitate adaptive management of social impacts, including impacts on residential amenity	▪ Consultation with residents in and near the Project footprint supports management of Project impacts in accordance with EIS Chapter 23: Draft Outline EMP ▪ CRG feedback confirms ARTC has engendered positive relationships ▪ Number of complaints about Project impacts ▪ Mitigation measures are refined where necessary in response to stakeholder feedback	▪ Contractor will document stakeholder interactions, monitor the effectiveness of engagement programs, report on the complaints register, and identify and report on issues to be addressed as part of environmental management ▪ Contractor will request feedback about stakeholder engagement and relationships as a regular item at CRG meetings ▪ Community Relations Monitor will review and provide advice on the	Monthly monitoring, quarterly reporting to CRG, during construction phase

Outcomes	Performance measures	Mechanism	Timing
		Stakeholder and Community Engagement Plan, and be available to community members	
Initiatives identified through stakeholder engagement have benefits for local communities and offset impacts on amenity, character and cohesion	▪ Number and outcome measures (to be determined with partners) for community partnerships and programs in potentially impacted communities ▪ CRG will receive reports on SIMP implementation and AMP implementation for their feedback	▪ ARTC and/or the contractor will agree outcome metrics with funded projects and partners ▪ Information on Project-supported initiatives will be provided to the CRG for feedback ▪ Feedback from Council/ community/ government partners	Annually during construction Reports on SIMP implementation at each CRG meeting, and on AMP implementation on a six monthly basis,
Community members have access to information and support to assist adaptation to changes resulting from the Project	▪ CRG feedback confirms satisfactory access to timely information about the Project and management measures ▪ Landowners who need to move from within the Project footprint have access to support, if required ▪ Mental health partnership is maintained during the construction phase	Feedback on the effectiveness of community and stakeholder engagement measures at each CRG meeting ▪ Community Relations Monitor ▪ ARTC and PHNs will monitor service uptake (mental health and relocation support) from potentially impacted communities	Quarterly during first construction year, then as agreed with Community Relations Monitor
Stakeholder issues and grievances are identified, evaluated, addressed and recorded	▪ The Project responds to complaints from community members as per the ARTC Complaints Management System	▪ Complaints register ▪ The contractor will monitor complaints and the status of their resolution, and provide a report on complaints at each CRG meeting ▪ ARTC Inland Rail will regularly monitor the quality and effectiveness of the complaints management system and require the contractor to revise implementation where appropriate, based on stakeholder feedback	Monthly monitoring, quarterly reporting to CRG during construction

8.2.10 Incorporation of stakeholder inputs in development of management measures

As described in Section 8.2.5, ARTC will conduct community information sessions and other meetings with stakeholders during the EIS display period to seek stakeholders' feedback on the EIS. The results of engagement during and after display of the draft EIS and the results of public and community submissions will be reflected in the information provided to OCG by ARTC prior to the Coordinator-General's evaluation of the EIS.

ARTC will continue engagement with ICC and SRRC during the draft EIS public display phase and following review of Council submissions to the draft EIS. This will include discussion of the SIA's findings and in particular:

- Housing and accommodation: the scope of the AMP (as outlined in Section 8.4)

- Workforce management: obtaining an update on Councils' priorities as part of RSIS, SQW, and economic development/recovery initiatives, and to confirm Council's interest in joint initiatives
- Community wellbeing:
  - Seeking Council feedback on social issues and community needs in light of COVID-19-related impacts e.g. increased unemployment, population mobility and business conditions
  - Discussion of Council and community initiatives which the Project could support (e.g. placemaking, community facility upgrades, community events) to strengthen local amenity, character and cohesion
  - Seeking input on Council's priorities and community or Council initiatives which could be considered as part of the Community Wellbeing Plan (refer Section 8.5.4) and the process for Council involvement in development of the plan
- Local business and industry: seeking advice on business and tourism conditions following COVID-19 restrictions, and refining Inland Rail Skills Academy business capability strategies to reflect Councils' advice
- Other Council priorities emerging from their consideration of the draft EIS.

The results of further engagement with Councils during and after display of the draft EIS will be reflected in the information provided to OCG by ARTC prior to the Coordinator-General's evaluation of the EIS.

During the Project's detail design, pre-construction and construction phases, stakeholder feedback will be incorporated in the refinement of management measures as follows:

- Consideration of feedback from landowners and other stakeholders on the effectiveness of design, environmental and social impact management measures of relevance to their properties
- Monthly recording of community complaints to identify any issues or trends that need to be addressed as part of implementing environmental management plans, with any changes reported as part of quarterly reports to the CRG
- Seeking feedback from CRG members on the effectiveness of stakeholder engagement and on SIMP implementation
- Involvement of Councils and CRG members in annual reviews of the SIMP.

8.3 Workforce management

The Project's construction phase offers the opportunity for employment of 620 personnel, with an average of 271 FTE personnel across the full construction period. The size and composition of the workforce will vary depending on the construction activities being undertaken and the staging strategy adopted. Employment opportunities will be available for professional staff and supervisors, trades workers and plant operators, earthworks crews, bridge structure teams, capping and track-works crews, safety and signalling systems installation crews, fencers, and labourers.

One of ARTC's primary aim is to maximise employment opportunities for residents within the Project region, by:

- Facilitating skills development opportunities through the Inland Rail Skills Academy to build regional capacity in construction and rail operation
- Building partnerships with training providers to strengthen workforce skills in the Project region, and reduce the potential for cumulative impacts to draw labour and skills from other businesses
- Requiring the contractor to employ locally, and to implement workforce training and diversity strategies.

The following sections outline the Project's management measures to achieve local community benefits through employment and training.

8.3.1 Training and development in the Project region

Inland Rail has a signed Memorandum of Understanding with CSQ, an independent body funded by the Building and Construction Industry Training Fund. Under the MOU, CSQ will provide information and advice on skills shortages in the Project region to ARTC, and work with ARTC to broker and enable training responses to address identified shortages.

As noted in Section 7.2.3, ARTC has established the Inland Rail Skills Academy to facilitate local training, employment and procurement opportunities. The Inland Rail Skills Academy will include a range of partnerships to enable:

- STEM and trades education in schools, including opportunities to 'try' trades and professions associated with rail and construction
- University scholarships with a focus on courses which facilitate STEM and regional development outcomes, e.g. engineering and project management,
- Apprenticeships, traineeships and facilitation of industry accreditation to support employment into Inland Rail projects and other major regional industries
- Business capacity building programs with small-to-medium enterprises to strengthen capacity in the region for both this Project and other future projects
- Opportunities for Inland Rail staff to increase skills in a range of areas including safety and sustainability.

To date, this has involved:

- Alignment of Project initiatives with ICC and SRRC's Regional Skills Initiatives Strategy projects (in progress)
- With the University of Southern Queensland, establishing a scholarship to be offered to local residents to support skills development that will support regional development e.g. engineering or project management (one scholarship has been awarded and the second is pending)
- As part of the MOU with CSQ and in partnership with Registered Training Organisations, planning for provision of information to job seekers and employers, and subsidised access to construction skills training programs, traineeships and apprenticeship in the building and construction industry, including introductory trade-readiness courses such as 'Try a Trade'
- Cooperation with DITRDC to develop program-wide training and development programs to equip Project region residents for construction and operational employment

Training opportunities provided as part of the Inland Rail Skills Academy will strengthen workforce capacity for both Project construction and Project operation. Consultation with CSQ indicates that the availability of construction skills training, recognised skills pathways and certification courses for construction in SEQ is good, however there are systemic issues with the availability of skills programs for operational skills and maintenance skills.

There is potential for a partnership with QR to access experienced rail operators and maintenance staff as trainers in the Project region, with particular strengths in operations and maintenance skills in the Ipswich region, which will be further discussed with QR after the Project is approved. There is also potential for cross-industry training to be developed to equip experienced agricultural workers with certification which will increase their job opportunities, including with Inland Rail.

ARTC has also made specific commitments to training and development opportunities for Indigenous people, including:

- Working with the Yuggera Ugarapul People and DATSIP to support the design and delivery of training and development programs to improve local capacity where this is needed (initiated in 2020)
- Working with schools and training providers to provide relevant training for Indigenous people (to be commenced upon Project approval)
- Working closely with the Indigenous community to strengthen community members' capacity for employment and increase the number of Indigenous people applying for Project-related jobs (throughout the detailed design phase)
- Providing a workplace that is inclusive and values the contributions of Aboriginal and Torres Strait Islander employees (throughout construction and operation).

8.3.2 Local employment

As noted in Section 8.1.2, the Australian Jobs Act defines 'local' as including Australian entities, however for the C2K Project, ARTC is also focusing on activities which maximise opportunities in the Project Area i.e. the Ipswich and Scenic Rim LGAs.

The Project expects to be able to draw a large proportion of its construction workforce from the Ipswich and Scenic Rim LGAs as:

- Both LGAs have established workforce strengths in construction, with approximately 8,871 people working in the construction industry in 2016 and almost 2,600 registered construction industry businesses in the Project region in 2016-17 (refer Section 5.4.2)
- In March 2020, 10,430 Project region residents were unemployed, including 9,149 Ipswich LGA residents and 1,281 Scenic Rim LGA residents (DESE, 2020)
- The number of Project region residents receiving Jobseeker or Youth Allowance increased from 13,139 people to 21,350 people between March and July 2020, signalling that June 2020 quarter unemployment data will reveal a large increase in unemployment and therefore labour availability, which is likely to persist to some degree into 2021-2022
- The Project's workforce is expected to peak in 2022 at approximately 620 personnel, with an average requirement across the construction period of approximately 271 personnel, which would not cause a significant drain on the Project regions' labour force
- Regional level labour projections for 2018-2023 indicate that the West Moreton region is projected to have an average annual average surplus in construction workers until 2023

It is possible that in the cumulative context, the Project will compete for labour with other major infrastructure projects (refer Section 7.6.2). It is also possible that COVID-19 restrictions on mobility will affect the availability of labour, e.g. local workers may be less likely to travel to other regions or states for work, increasing availability, or if areas within the Project region were declared as restricted areas during construction, labour mobility to the region would be constrained. Assessment of likely changes to labour mobility related to COVID-19 restrictions would be speculative at best at this stage.

ARTC's strategies to maximise local and Indigenous participation in the Project workforce include:

- Analysis - ARTC has a partnership with CSQ to identify skill shortages in the Project region and develop locally applicable training pathways, with other training partners, as part of the Inland Rail Skills Academy

- Training and education – the Inland Rail Skills Academy provides the framework for access to relevant training for residents in the Project region, including access to 'Try a Trade' programs, scholarships and 'Skilling Queenslanders for Work' (SQW) programs which provide training to people who are under-utilised or under-employed in the labour market, currently being developed in consultation with SRRC, with consultation with ICC on SQW opportunities pending
- Business Capability Development – based on assessment of local skills availability, delivery of capability development programs for local and Indigenous businesses through Inland Rail Skills Academy partnerships with DESBT and DITRDC (noting that discussions with DESBT and DITRDC are ongoing, and businesses are generally reluctant to invest in training and development before they have certainty about Project approval outcomes)
- Communication – sharing information about Project opportunities with local businesses that employ local people through supplier registration portals and contractor webpages, industry/supplier briefings and supplier guides and factsheets
- Contract requirements - Inclusion of local employment targets, activities and criteria in construction contracts, and requirements relating to local training and employment opportunities.

To boost local workforce numbers, the Project's procurement process for the construction contract enables competitive bidding for local employment targets and procurement targets, incentivising the contractors to maximise local benefits. To ensure that tenderers are able to competitively bid for Project construction, they will be:

- Encouraged to familiarise themselves with the demographic, social and economic features of the Project region as outlined in the Social Chapter of the Project's EIS and the EIS Social Impact Assessment Technical Report, to assist in establishing appropriate social performance commitments and targets
- Required to consult with Construction Skills Queensland to understand skills analysis modelling and implications for labour requirements, and to look for opportunities to align skills development activities with broader Construction Skills Queensland and Inland Rail Skills Academy initiatives
- Required to detail the following which will form a key part of the tender evaluation:
  - Targets (numbers and percentages) for employment and workforce development by location (i.e. Project Area/LGA) and demographic (e.g. youth and Indigenous employment)
  - Training strategies for the construction phase
  - Strategies for recruitment and training of personnel from the Scenic Rim and Ipswich LGAs
  - Workforce health and safety strategies
  - Workforce Code of Conduct.

During the construction period, construction managers will be required to report to ARTC on the delivery and outcomes of training strategies and goals. Regular updates on these activities as well as Indigenous participation will be provided through a quarterly public snapshot report proving information on the employment and business participation from the Ipswich and Scenic Rim LGAs.

ARTC and its contractors will use multiple platforms to advertise job opportunities and promote the availability of employment Expression of Interest forms through community forums, newsletters and Inland Rail websites.

Inland Rail's AIPP and Sustainable Procurement Policy will maximise the involvement of businesses with existing capacity, and includes a focus on building local businesses' capacity, to increase the number of businesses in the Project region that can successfully compete for Project supply opportunities (refer Section 8.6). This will also increase employment opportunities for workers and jobseekers in the SIA study area.

There is also the potential for people from local communities to gain employment in Project operations. Actions initiated during the construction phase will address development of capacity of the local and regional workforce for employment in the operational phase and may include cooperation with QR to access and share the skills of experienced rail operators.

Management of the Project's operational workforce will be in accordance with the training and employment strategies established by ARTC and/or the contractor.

8.3.3 Indigenous training and employment

Training and employment opportunities are a key priority for Indigenous people who participated in Project consultation. Inland Rail has a particular focus on optimising Indigenous employment in its projects. Measures identified in consultation with Traditional Owners for implementation in the detailed design phase are detailed in **Table 8-9**.

ARTC's MOU with CSQ to provide a framework for the development of construction skills training programs includes a specific focus on training programs targeted towards Indigenous jobseekers.

Indigenous businesses are an important source of employment for Indigenous people and will be encouraged and supported to participate in the Project's supply chain, as discussed in Section 8.6.

8.3.4 Impacts on employment in other industries

There is potential for land acquisition to affect the productivity of agricultural properties and therefore access to employment on these properties. ARTC is working with the owners of agricultural properties to minimise the impacts of land acquisition on their productivity and therefore on farming employment opportunities.

Tourism businesses may experience changes to visitation if tourists are deterred by changes to scenic character or road works during construction.

As outlined in Section 7.6, there is potential for cumulative social impacts to include exacerbation of current shortages of civil engineering professionals, construction project managers and construction trades, and to contribute to shortages of trades people and machinery operators, which may constrain domestic and business access to tradespeople.

During construction, ARTC will monitor Inland Rail projects' workforce ramp-up and the proportions of local and non-local personnel and consult with local Councils and Chambers of Commerce regarding any pressures they identify on local labour availability. This will provide the basis for refining recruitment and training strategies if the Project is exacerbating labour shortages.

8.3.5 Workforce behaviour

ARTC aims to ensure that the Project is constructed and operated in a manner which protects the health and safety of Project personnel and the local community.

ARTC commits to providing a safe and healthy workplace for all personnel. The contractor will provide a safe and healthy workplace in accordance with the *Work Health and Safety Act 2011* (Qld) and regulations, and in accordance with subsequent legislative amendments.

The Project will employ the following strategies to reduce concerns and the potential for any impacts of workforce behaviour on community safety or residential privacy:

- Enforcing a Code of Conduct containing requirements for positive behaviours and respect for local residents and businesses will apply to all personnel
- Ensuring that the contractor has appropriate work conduct policies and procedures, and complaints mechanisms which ensure fast and effective resolution to any issues experienced.

8.3.6 Action plan

Table 8-9 summarises workforce management and development objectives, outcomes and actions which will maximise the employment of people from the Project region and Indigenous people in the Project's construction workforce, increase the skills profile of the Project region's labour force, manage workforce behaviour, and minimise impacts on other businesses.

Actions 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 Project's operational workforce will be in accordance with ARTC's established training, recruitment and employment strategies.

Table 8-9: Workforce management – construction

Workforce management measures	
Objectives	▪ Enable residents of nearby communities and the Project region to access the Project's construction and operational employment opportunities ▪ Facilitate and support workforce training and development pathways to build labour force skills ▪ Minimise impacts on employment in other industries ▪ Provide a safe and healthy workplace for all personnel ▪ Manage workforce behaviour to avoid impacts on community safety and community values
Outcomes	▪ Local contractors and job seekers (from within the Project region) are involved in the Project construction workforce ▪ Construction employment opportunities are available to Yuggera Ugarapul People and other local Indigenous people ▪ Training partnerships strengthen workforce capacity for Project employment and other industries ▪ Project personnel behave with respect and courtesy towards residents, landholders and motorists ▪ Workplace health and safety are supported through a strong safety culture ▪ Impacts on agricultural or tourism employment opportunities are minimised
ARTC Commitments	▪ ARTC will develop strategies to promote engagement of local workers ▪ Minimum local employment targets will be negotiated and agreed between ARTC and the contractor ▪ Contractors will be required to seek workers from the Ipswich and Scenic Rim LGAs where possible ▪ Develop strategies to promote engagement of local workers from the Ipswich and Scenic Rim LGAs ▪ Require contractors to encourage employment, training and skills development opportunities by: – identifying the skills required in the building, construction, equipment and services fabrication and supply, maintenance, operation and support to the Inland Rail Program, for its design, construction, operational and maintenance phases

Workforce management measures	
	– arranging timely training, and qualification arrangements to meet the needs of skills development to support all phases of the Inland Rail Program – ensuring that training and qualification systems meet the requirements of the National Standards Framework ▪ Establishment of the Inland Rail Skills Academy ▪ Provide a clear and efficient process for people to seek information about employment opportunities and register their interest ▪ Work closely with Indigenous communities to strengthen community members' capacity for employment, support the design and delivery of training and development programs, encourage applications and increase the number of Indigenous people applying for Project-related jobs ▪ Work with key partners to link training and development programs with other projects and local industries to provide the greatest regional benefit ▪ Work with schools and local training providers to provide appropriate training ▪ Work with the Commonwealth and Queensland Governments to provide long term outcomes through training, mentoring and other support programs ▪ Provide a workplace that is inclusive and values the contributions of Aboriginal and Torres Strait Islander employees
Measures – detailed design phase	**Local employment** ▪ Work with CSQ to identify the availability of skills in the Project region and potential shortages in trades and professions that will be required for construction of Inland Rail projects, to inform the development of training and development programs ▪ Include requirements in procurement and contracting processes relating to employment participation and initiatives for Indigenous people, women, people under 25 years and residents from the Project region ▪ Establish partnerships as part of the Inland Rail Skills Academy to develop training pathways for employment of Project region residents in Project construction and operation **Training and development** ▪ Consult with DESBT and Department of Education, including local high schools, to identify opportunities to align Inland Rail's workforce training and development initiatives with the Queensland Government's jobs, skills and workforce diversity programs ▪ Work with DITRDC, DATSIP and CSQ to develop training programs to be delivered through the Inland Rail Skills Academy to equip local people for Project employment ▪ Continue engagement with ICC and SRRC regarding alignment with RSIS priorities (including cross-over skills between construction training and RSIS priorities) and utilisation of the SQW program as part of Inland Rail training and development initiatives
	Indigenous employment ▪ Continue to consult with Yuggera Ugarapul People, Jagera Daran People, CSQ, DATSIP and training providers, ICC and SRRC to identify potential opportunities for early skilling programs for Indigenous workers ▪ Facilitate a meeting between Yuggera Ugarapul People and DATSIP to discuss the Project and assistance available for business capacity and training programs (complete) ▪ Encourage Yuggera Ugarapul People to express their interest in the Indigenous Ranger program to DES ▪ Enable meetings between Traditional Owner groups and the contractor to discuss employment, training and business strategies ▪ Require contractors to specify and meet Indigenous employment goals

Workforce management measures	
	Impacts on employment in other industries ▪ Implement measures agreed with directly affected and adjacent landholders (refer Section 8.2), to reduce potential impacts on farm productivity which may otherwise affect the availability of agricultural employment ▪ Through implementation of training partnerships and alignment with RSIS initiatives, strengthen workforce capacity for Project employment and other industries in the Project region to build a stronger regional skills base and reduce labour draw and skills shortages which could affect other businesses ▪ Work with tourism industry stakeholders to address potential impacts on tourism facilities or tourism visitation (refer Section 8.6) ▪ Establish consultative arrangements with Scenic Rim and Ipswich Chambers of Commerce to support monitoring of any issues identified in relation to labour draw
Measures - pre-construction phase	**Local employment** ▪ Provide information to Project region residents (including those without internet access) regarding the construction timeframe, employment opportunities and how to express interest in employment, contracting or supply opportunities ▪ Establish a Local Employment Register to track and monitor participation in construction employment by people from the Project region, including identification of Indigenous personnel with their agreement ▪ Implement training and development initiatives as part of the Inland Rail Skills Academy which will increase workforce skills that are also applicable to other industries in the region e.g. agriculture **Indigenous employment** ▪ Facilitate a meeting between Traditional Owner group representatives and the contractor to discuss targeted initiatives such as training and mentorship for Indigenous workers ▪ Provide Indigenous mentors within the Project workforce ▪ Communicate with Traditional Owner groups regarding the range of business opportunities which will be available during construction, the availability of Indigenous businesses to participate and the types of capacity building programs that Indigenous businesses may need to prepare for involvement in the Project supply chain ▪ Implement Indigenous training and skills development programs agreed with Traditional Owner groups as part of the Inland Rail Skills Academy and/or as part of the contractor's delivery plans
Measures – construction phase	**Impacts on other businesses/industry** ▪ Monitor Inland Rail projects' workforce ramp-up and the proportion of Project personnel drawn from within the Project region ▪ Consult with local Councils and Chambers of Commerce regarding any pressures they identify on local labour availability ▪ Maintain support for training programs which equip local people for construction employment ▪ Consult with high schools and training providers in the Project region to identify young people and groups of young people who could be supported to obtain employment in the Project's operations. **Training and development** ▪ Continue to implement training programs and partnerships to equip local and Indigenous people for construction employment, including programs agreed with Councils that align with RSIS priorities and support SQW programs.

Workforce management measures	
	Local employment ▪ Implement Indigenous training and skills development programs agreed with Traditional Owner groups as part of the Inland Rail Skills Academy and/or as part of the contractor's delivery plans ▪ Monitor the contractor's progress towards local and Indigenous employment targets and require corrective actions (e.g. improved local training and recruitment strategies) if targets are not being met ▪ Consult with high schools and training providers in the Project region to identify young people and groups of young people who could be supported to access training for potential employment in the Project's operations ▪ Promote operational roles to Project region residents ▪ Continue engagement and training programs with Indigenous community members to ensure operational roles are considered by Indigenous people **Labour availability** ▪ ARTC will monitor Inland Rail projects' workforce ramp-up and the proportions of local and non-local personnel, and consult with local Councils, DESBT and local Chamber of Commerce regarding any pressures they identify on local labour availability ▪ If the Project is contributing to cumulative pressures on labour availability, ARTC will engage with the contractor to refine the Project's recruitment and training strategies **Workforce behaviour** ▪ Ensure that the contractor has an appropriate workforce Code of Conduct and procedures, complemented by complaints mechanisms which ensure fast and effective resolution to any issues experienced ▪ Require the contractor to report on implementation of and compliance with the Code of Conduct ▪ Implement authorisation procedures and means of identification for personnel accessing private property

8.4 Housing and accommodation

The Project expects that construction personnel will be drawn from communities in the Project region and in nearby LGAs within the Greater Brisbane region. On this basis, the Project is unlikely to result in a significant increase in demand for housing in the Project region during either construction or operation, or to affect housing availability in nearby communities or the Project region.

The construction period may result in a small increase in demand for short term accommodation within the Ipswich and Scenic Rim LGAs, but this demand may also be met in the nearby LGAs of Logan and Brisbane. Potential impacts on housing and accommodation and the process for developing the Project's AMP are summarised below.

8.4.1 Affordable housing

On the basis of estimates provided in the SIA, approximately 31 households who are renting DTMR-owned properties within the EIS investigation corridor would need to relocate. There is potential for DTMR tenants, who may include low income households and/or Indigenous families, to require affordable housing and/or assistance to relocate.

Strategies to reduce the impacts of property acquisition on landholders, tenants and their families are provided in Section 7.1.2 and include identifying displaced households' specific needs and concerns, and where required, referral to services which can support them in the relocation process. This will include referral of DTMR tenants (including information sharing as approved by the tenants) to DTMR and DHPW to enable their response to tenants' needs.

The Palm Meadows Home Village, Willowbank Caravan Park and Amberley Caravan Park are located approximately 3.3 km north of the Project alignment and also accommodate people with low incomes. ARTC will advise the contractor that use of caravan park accommodation within the Project region should not be considered as part of its AMP to avoid displacement of low income households.

ICC's and SRRC's requests to avoid facilitating the development of new small/urban sized lots in rural areas is acknowledged. ARTC will not seek to register new vacant residential lots as part of the Project, and will communicate the Councils' requests to the Constructing Authority.

8.4.2 Housing access

The Project expects to primarily recruit its workforce from the Project region and nearby LGAs. There is potential for a small number of Project personnel to rent homes in the Project region during the construction phase but this is not expected to impact on housing availability (refer Section 7.3.2). There is also potential for cumulative impacts for accommodation to impact on rental housing availability, if not managed (refer Section 7.6).

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.

ARTC will require the contractor to provide an AMP for ARTC's approval, and to consult with ICC and SRRC as part of the AMP's development. The AMP will provide details of how non-local workers will be accommodated, and how ARTC's program-wide accommodation principles will be addressed, as detailed in Section 8.4.4.

ARTC will monitor the implementation and effectiveness of the AMP and provide the results of monitoring as part of the annual SIMP report.

ARTC will communicate with ICC and SRRC about EIS results of relevance to rail operations (e.g. noise impacts and road network operation) to support their consideration of any development control measures required to protect the amenity and liveability of residents in areas which are planned for future urban growth.

8.4.3 Short term accommodation

The Project does not anticipate heavy reliance on short term accommodation such as hotels and motels during the construction or operations phases. There is however potential to contribute to cumulative demands for short term accommodation which could displace tourists, which will be addressed as part of the AMP. It is also likely that accommodation providers in the Project region would welcome the opportunity of increased trade.

Construction noise has potential to affect the amenity of short-term tourist accommodation provided at IRCEC and Flinders Peak Winery (refer Section 7.5.2) whilst roadworks and construction of the rail corridor are occurring near these facilities, which could result in a decline in use of the accommodation if not adequately managed. EIS Chapter 23: Draft Outline Environmental Management Plan outlines relevant mitigation strategies as referenced in Section 7.3.3 to address these construction noise impacts.

8.4.4 AMP

The contractor will be required to provide an AMP for the Project, which will reflect ARTC's accommodation management principles of minimising negative social and economic impacts in potentially impacted communities, consulting potentially impacted communities on accommodation solutions, and contributing social and economic value to potentially impacted communities.

The AMP will be developed during the detailed design phase when the construction schedule and workforce profile are confirmed. The process for developing the draft AMP will include:

- Consulting with CSQ on the results of their labour force analysis
- Identifying the likely number of Project personnel who would be drawn from outside a daily driving distance and would require accommodation, and the timing for that requirement
- Consulting with peak tourism associations in the Project region and accommodation providers in potentially impacted communities to identify the availability of short term accommodation, including typical changes in demand throughout the year, and accommodation providers' interest in providing accommodation for Project personnel
- Researching the availability of rental housing, vacancy rates and rental costs in potentially impacted communities, to avoid selecting accommodation solutions which would put pressure on access to rental housing
- Developing an accommodation register identifying acceptable accommodation solutions which may include:
  - Accommodation providers in potentially impacted communities, noting seasonal and event-related peak demands in each LGA
  - Accommodation providers in other Ipswich and Scenic Rim centres who are interested in providing accommodation
  - Accommodation options in LGAs outside the Project region
  - Documenting rental vacancy rates and the number of rental homes available for postcodes within the Project region
- Identifying potential accommodation solutions based on the availability of short term accommodation and rental housing in the Project region, with outcomes to include:
  - Avoiding use of caravan parks and mobile home parks in the Project region (e.g. requiring sub-contractors to avoid use of these facilities)
  - Avoiding use of rental housing in Project region postcodes where the rental vacancy rate is less than 3.0 per cent which signifies a tight rental market (e.g. choosing rental arrangements in regional centres with greater housing availability)
  - Use of local accommodation providers, where this would not displace tourists or event visitors
  - Provision of a monitoring framework which will track accommodation use by Project personnel and accommodation availability in the Project region
- Consulting ICC, SRRC and peak tourism associations on the draft AMP

- Finalising the AMP for implementation from the pre-construction period and throughout the construction phase.

The contractor will be required to monitor on a quarterly basis:

- The number of personnel using accommodation in the Project region, and the type and location of accommodation used
- Through consultation with the owners or agents of accommodation being used by Project personnel, the potential for conflict with tourism or event-related demands so that alternative accommodation providers can be used when necessary
- Rental housing availability in Project region postcodes, to minimise the potential for Project-related pressure on rental housing markets.

ARTC will review the monitoring data and may require the contractor to refine their accommodation solutions if adverse impacts on housing and accommodation availability are identified.

8.4.5 Action plan

Objectives, outcomes, commitments and measures which will support achievement of ARTC's accommodation principles are outlined in **Table 8-10**.

Table 8-10: Housing and accommodation

Housing and accommodation measures	
Objective	▪ Avoid adverse impacts on the availability of local housing and short term accommodation
Outcomes	▪ Project workforce demands for accommodation do not result in displacement of local residents from rental housing ▪ Any workforce accommodation demands are managed to avoid displacement of tourists from accommodation in the Ipswich and Scenic Rim LGAs ▪ Accommodation providers in the Project region benefit from any project requirements for workforce accommodation
ARTC Commitments	▪ ARTC will require the contractor to provide an AMP which addresses Inland Rail's program-wide accommodation principles including: ▪ Accommodation solutions minimise negative social and economic impacts ▪ Potentially impacted communities are consulted on accommodation solutions prior to them being decided ▪ Accommodation solutions contribute social and economic value to potentially impacted communities ▪ If monitoring data indicates a decrease in rental vacancy rates or the availability of short term accommodation in the Project region (from a baseline established prior to construction commencing) to which the Project is contributing, ARTC will require refinement of the AMP to minimise negative social impacts to potentially impacted communities ▪ ARTC will not seek to register new vacant residential lots as part of the Project, and will communicate ICC and SRRC concerns on this issue to the Constructing Authority
Measures – detailed design phase	**Affordable housing** ▪ Having regard to privacy and confidentiality responsibilities, and with tenants' agreement, ARTC will provide relevant consultation data regarding DTMR tenants that are experiencing hardship or may require assistance to find affordable housing to DTMR and DHPW, to enable a collaborative response to support for these households

Housing and accommodation measures	
	Impacts on access to housing or short term accommodation ▪ The contractor will provide an AMP which will address: – Alignment with ARTC's program-wide accommodation principles – Identification of the number of personnel who could require short term accommodation or temporary housing and the duration of need – Identification of accommodation solutions in consultation with ICC, SRRC and tourism networks e.g. a use of a mix of local and broader regional short term accommodation options – Measures to avoid impacts on the availability of rental housing and short term accommodation, to include a short-term accommodation register which identifies accommodation options with sufficient capacity (e.g.. options in the Ipswich and Brisbane LGAs) and peak occupancy periods (i.e. high tourist periods) and would be developed in consultation with relevant local Councils and accommodation providers. – Measures to avoid impacts on low income households including avoiding use of caravan parks and mobile home parks in the Project region – Measures to enable local accommodation providers to benefit from Project accommodation arrangements – The results of consultation with Councils and peak tourism associations in the Project region regarding: ▪ the likely availability of accommodation at the time construction is planned to commence, and including average occupancy rates and peak tourist demand periods, ▪ seasonal and event-related peaks where demands on local short term accommodation should be minimised to avoid displacing visitors – Mechanisms to monitor: ▪ the number and percentage of the Project's workforce requiring accommodation ▪ the type of accommodation being used ▪ the number of people being accommodated in the Project region each month ▪ rental vacancy rates in potentially impacted communities ▪ any strains on local rental housing stock or short term accommodation providers' capacity to service tourists ▪ As part of reviewing the contractors' draft AMP, ARTC will consult with ICC, SRRC and QPS (Ipswich and Boonah district offices) to identify any concerns which should be addressed in the AMP **Construction impacts on tourism accommodation** ▪ Consult with IRCEC and Flinders Peak Winery regarding the potential for construction noise exceedances on accommodation whilst works are in the vicinity of these facilities and identify the need for any additional mitigation measures to reduce noise exposure ▪ Further measures addressing impacts on tourism businesses which include tourist accommodation are provided in Section 8.6.
Measures - pre-construction phase	**Impacts on rental housing access or short term accommodation** ▪ Contractors will be required to estimate and report on the number of personnel (outside a safe daily driving distance) that are expected to be required over the duration of the pre-construction phase ▪ The contractor will commence implementation of the AMP and monitoring of AMP outcomes

Housing and accommodation measures	
Measures - construction phase	**Impacts on rental housing access or short term accommodation** ▪ Contractors will review and amend or confirm estimates of the number of personnel (outside a safe daily driving distance) that are expected to be required over the duration of the construction phase ▪ The contractor will implement the AMP and report on the outcomes to ARTC quarterly ▪ ARTC will monitor the outcomes of AMP to identify any strains on: – Local rental housing stock (as indicated by trends in rental vacancy rates in the relevant postcodes) – Short term accommodation providers' capacity to service tourists, as indicated by consultation with local tourism associations ▪ If any strains on housing or accommodation as a result of the Project are identified, ARTC will work with the contractor to refine the AMP which may include alternative training, recruitment or accommodation strategies ▪ The delivery and outcomes of the AMP will be reported as part of the Project's SIMP reports.

8.5 Health and community wellbeing

Potential impacts on health or community wellbeing are summarised below, and measures to mitigate impacts are provided in **Table 8-11**.

8.5.1 Social infrastructure

The Project may increase demands for police and emergency services as the result of increased traffic increasing the risk of road accidents and for police, the need for traffic control assistance and oversize vehicle escorts. Construction activities including roadworks also have potential to delay emergency response vehicles.

Construction traffic may use roads which are school bus routes, or where schools in Rosewood are located, requiring cooperation with stakeholders to address any potential risks to traffic or pedestrian safety.

There is potential for an increased need for community support services for residents adjusting to stresses resulting from the Project. The Project's investments in local communities will focus on programs and services designed to strengthen local social networks and cohesion and ensure the potential benefits from the Project (such as access to jobs and training) are available to residents in potentially impacted communities. This would help local communities to adapt to Project-related changes and build their resilience to change.

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 community projects. Examples of funded projects may include community resilience-building days, establishing a mentoring program for young entrepreneurs in the area, and community development projects.

As part of planning during the detailed design phase, ARTC will engage with stakeholders including ICC, SRRC, Queensland Health, DCDSS, the PHNs and community groups, to identify cooperative actions to be implemented during the construction phase to address emerging or changing community needs and manage and enhance community health and wellbeing (refer Section 8.5.4). Council participation in tracking the SIMP's outcomes and developing adaptive management measures required to address any emerging or changing needs will also be sought.

During the pre-construction phase, the Project will communicate with Queensland Health to ensure hospital services are aware of the construction program and workforce ramp up to enable planning for any minor upgrades to services which may be required. The Project will also consult with DCDSS in identifying any Project-related stress on community services and organisations in the Project region.

During operations, the Project's infrastructure and rail operations may result in demands on emergency services, potential changes to emergency response times, and changes to the noise environment in the EIS investigation corridor. EIS Chapter 19: Traffic, Transport and Access, and Chapter 23: Draft Outline Environmental Management Plan includes strategies and actions addressing traffic management, and application of safety design standards to mitigate safety risks. Planning for ongoing cooperation with emergency services during the Project's operations will be initiated during the construction phase.

8.5.2 Health and environmental qualities

During construction, the Project will introduce noise, vibration and dust sources which may impact on the amenity of homes or outdoor areas. The EIS includes assessment of potential environmental impacts and provides mitigation measures to avoid impacts on health. Notwithstanding, environmental impacts may detract from quality of life, e.g. comfortable use of outdoor areas, whilst construction activities are occurring near homes.

EIS Appendix Q notes that noise resulting from freight rail operation has potential to disrupt sleep at private properties within close proximity to the alignment. Measures provided in EIS Appendix Q include engagement with the owners of dwellings where noise levels trigger investigation of mitigation measures to agree property-specific mitigation measures to reduce noise levels.

Community concerns about dust emanating from the rail corridor during operation indicate the need to provide information to the community about how dust from the Project's construction and operation will be minimised.

8.5.3 Mental health and quality of life

The Project's EIS period has involved stress and anxiety for some stakeholders, due to concerns about property acquisitions, amenity impacts or environmental change. Stress is likely to be ongoing for directly affected landholders during the acquisition process, and fears about construction impacts and ongoing operational impacts may continue to cause stress and anxiety for other residents. Stress may impact on people who are already vulnerable due to stressors such as flooding and drought, and may impact on mental health and quality of life.

Inland Rail has developed mental health partnerships with the Darling Downs and West Moreton PHN and the Brisbane South PHN. The PHNs' role is to provide oversight and coordination of federal funding for mental health (and other health) services. The purpose of the mental health partnership is to:

- Promote local, independent mental health services which are accessible to stakeholders at no cost
- Ensure local mental health services, including General Practitioners, are aware of Inland Rail progress in local areas
- Provide resources and services to mitigate any increased demand caused by Inland Rail.

As part of the mental health partnership with ARTC, the Darling Downs and West Moreton PHN is working with the Richmond Fellowship Queensland (which has a service based in Ipswich) and Lives Lived Well (which has services located in Beaudesert and Beenleigh), to increase local access to the New Access program. The New Access program provides mental health support for residents in communities along the Inland Rail alignment which can be easily accessed through a phone call. This program has been selected as it is utilising and strengthens existing mental health services rather than replicating and competing with existing providers.

Similar services to the New Access program are being delivered in the Beaudesert area through the Brisbane South PHN. Conversations are continuing with Brisbane South PHN to ensure that Beaudesert and other smaller localities located at the far end of the Project area have access to mental health support.

Through the PHN partnerships, Lifeline's Darling Downs and south-west Queensland has also been supported to deliver Lifeline's Community Connections program in the Project region and to help strengthen community resilience and social networks. Additionally, PHNs are liaising with GPs in potentially impacted communities to ensure they are updated on the Project and aware of the services being supported through the mental health partnership.

There is also potential for additional services to be included within the partnership agreements e.g. support for residents who need to move from within the Project area. These will be developed during later phases of the Project.

ARTC has initiated mental health partnerships with the Darling Downs and West Moreton PHN and the Brisbane South PHN to support these residents and others who may experience stress and anxiety in relation to the Project and will regularly review the resources available and the adequacy of services in relation to Project-related demands on mental health services.

Along with stakeholder engagement processes outlined in Section 8.2, and the range of management strategies and commitments in regard to managing environmental changes, further measures are outlined in **Table 8-11** aimed at reducing the potential for community members to feel stressed or anxious about Project impacts.

8.5.4 Community Wellbeing Plan

The SIA has also identified likely impacts on residential amenity, local character and connectivity during construction, the potential for Project impacts on community cohesion, and the potential for Project impacts to affect people who are experiencing disadvantage (refer Sections 7.1.3 to 7.1.8). These impacts could individually or collectively affect the quality of life of residents in potentially impacted communities.

During the detailed design phase, the Project will prepare a Community Wellbeing Plan to provide a framework for cooperation with key stakeholders to implement mitigation measures addressing impacts on quality of life as the result of Project impacts on amenity, character, cohesion or connectivity.

The Community Wellbeing Plan will include:

(i) objectives and key performance indicators

(ii) measures to ensure that the level of service provided to the local community by existing social services, facilities and infrastructure is not reduced

(iii) measures to mitigate potential health and wellbeing impacts on local communities, and enhance potential benefits

(iv) emergency response arrangements and management measures agreed with emergency service providers, for incidents both on and off the project site

(v) details of community development programs to be implemented, and the outcomes to be achieved

(vi) monitoring and reporting protocol.

The Community Wellbeing Plan will include relevant measures identified in the SIMP as well as measures identified in consultation with SRRC, ICC, PHNs, DCDSS, and the owners of community facilities that would be affected by noise, during the detailed design phase. The Plan will include:

- Initiatives to upgrade community facilities, which could be delivered via ARTC's Community Donations and Sponsorship program (for minor works), direct Project funding to community facilities to implement mitigation or enhancement measures, and/or partnerships with Councils or government agencies
- Placemaking initiatives to offset impacts on local character e.g., interpretive signage, treatment of temporary hoardings, park or streetscape upgrades, and/or supporting rural localities and towns to upgrade their entrance statements, including reference to management measures designed to reduce impacts on visual amenity and non-Indigenous cultural heritage as detailed in the EIS Chapter 10: Landscape and Visual Amenity and Chapter 18: Cultural Heritage
- Providing funding through partnerships with SSRC and ICC for initiatives which strengthen sense of place e.g. park development or streetscape improvements
- Projects which support community cohesion and resilience, e.g. community events, arts and cultural programs, or skills training for volunteers and community organisations
- Supplementation of local services to address any increase in demand for individual and community support services as a result of the Project
- Cooperation with QAS, QPS, QFES, SES and Local Disaster Management Groups with respect to day-to-day demands on police and emergency services, and emergency response and recovery arrangements
- Consultative arrangements with key stakeholders to support implementation and monitoring
- Responsibilities for implementation.

Implementation of the Community Wellbeing Plan will commence during the pre-construction phase and be maintained during the construction phase. Progress on the implementation of the Community Wellbeing Plan will be reported to the CRG at each meeting, and annual monitoring of the Plan's outcomes will be included as part of the annual review of the SIMP.

8.5.5 Access to natural resources

Project construction is likely to damage or affect the accessibility of groundwater bores within the EIS investigation corridor, and there is potential for dewatering during construction of cuts and the tunnel to impact groundwater users. With respect to operation, groundwater bores may be inaccessible, and there is potential for lowered groundwater levels due to long term seepage into cuts and the Teviot tunnel. EIS Chapter 23: Draft Outline Environmental Management Plan outlines management measures including a Groundwater Monitoring and Management Program and mitigation arrangements with the owners of groundwater bores as necessary.

The Project intersects the proposed Boonah to Ipswich Trail where it is within the Wild Pig Creek Road corridor. The status of the trail is uncertain as works have been mothballed since 2012. If constructed in the alignment identified during 2011, the amenity of the trail in this area could be affected by periodic delays at level crossings and railway noise whilst trains are passing. Consideration of a re-alignment of the trail in this area could be given by any management authority appointed for the trail in the future.

Construction works and traffic on Middle Road Noise may disrupt road access to the Purga Nature Reserve, and during operation, railway noise may periodically disturb the quiet amenity of the Purga Nature Reserve.

8.5.6 Safety

The location of work sites and laydown areas near private homes may engender anxiety about personal and property safety for some residents living adjacent to the Project. ARTC will require the contractor to enforce a Code of Conduct and appropriate policies and procedures containing requirements for positive behaviours and respect for local residents and businesses, applying to all contractor and Project personnel.

Residents and emergency services have raised concerns that increased traffic and road works may impact on road safety. A comprehensive TMP will be provided for the construction stage. The contractor will deliver communication strategies to share information about construction traffic routes, peak construction periods, the Project's workforce conduct policies, and how to contact the Project in the event of any concerns.

The Project's operation also presents the potential for rail accidents, road-rail or rail-pedestrian accidents or suicides.

8.5.7 Action plan

Table 8-11 provides management measures which are designed to mitigate impacts on community health and wellbeing.

Table 8-11: Health and wellbeing

Health and wellbeing measures	
Objective	▪ Avoid and minimise impacts which may affect community wellbeing including mental health ▪ Provide a framework for communication with social infrastructure providers and Government agencies to minimise Project impacts on social infrastructure ▪ Maximise communication and co-operation with local stakeholders to address impacts on quality of life or community wellbeing ▪ Include a focus on vulnerable community members in Project engagement and social investment
Outcomes	▪ Changes in the amenity of residential properties and the potential for noise to disturb sleep are minimised in accordance with the Project's approval conditions and agreements with affected landholders ▪ Vulnerable residents who need to relocate or are affected by Project-related stressors are supported to adapt to changes ▪ Mental health and community support services are accessible to people in potentially impacted communities and are adequate to any increased demand resulting from the Project ▪ Government agencies providing health, police and emergency services have adequate information and cooperation from the Project to enable planning for increased/changing demands ▪ Loss of access to groundwater bores in the disturbance footprint or Project-related groundwater water drawdown affecting bores are mitigated and managed in consultation with the relevant bore owner ▪ The wellbeing of residents in the Project region is supported by access to Project employment, participation the Project's supply chain and Project cooperation in initiatives to support community wellbeing
ARTC Commitments	▪ Maintain a focus on creating a safe environment for all and supporting community wellbeing during the changes that Inland Rail will bring ▪ Implementation of ARTC's Sponsorship and Donation Program

Health and wellbeing measures	
	▪ Identify impacts and opportunities that have the potential to impact community wellbeing and, in consultation with the local community, develop appropriate programs or initiatives to address these impacts and opportunities ▪ Identify opportunities and develop programs to improve safety outcomes for local communities ▪ Continue to implement the mental health partnership with an appropriate provider at a program level, which will include a tailored focus on potentially impacted communities ▪ Ongoing engagement with Indigenous communities, families and Elders to support Indigenous employees, underpinned by coordination between contributing programs and agencies
Measures - detailed design phase	**Social infrastructure** ▪ In consultation with the PHNs, extend the mental health partnership to include provision of services to assist residents (landholders and tenants) whose homes would be removed from the corridor to access alternative accommodation and support services, if consultation with these residents indicates that support is required ▪ Provide an update on Project design, EIS findings and the construction program to Department of Education, Queensland Health, DHPW, QPS, QAS and QFES ▪ Develop arrangements with QPS, QAS and QFES to ensure effective communication throughout the construction phase, agree on cooperation procedures, and plan measures to mitigate impacts on emergency service response times during construction and operation (e.g. direct communication with construction managers) ▪ Meet with the QFES and rural fire brigades during the detailed design phase to enable a cooperative response to any fire risks affecting the EIS investigation corridor. **Health** ▪ Disseminate accurate, transparent and accessible information about the Project to the community, including information about the EIS outcomes ▪ Establish consultative arrangements that are accessible to all residents in the EIS investigation corridor and potentially impacted communities, including implementation of ARTC's Complaints Handling Management Procedure (refer Section 8.2.8) ▪ Provide information to communities about how noise, dust and traffic delays from the Project will be minimised, and consider community feedback about the effectiveness of measures in reviewing the CEMP. **Mental health** ▪ Communicate with residents whose properties would be acquired to keep them updated, ensure their concerns are considered, and provide referral to support services where required ▪ Through consultation, identify households where property severance or other changes to amenity may cause distress to residents, ensure their access to communication and complaints mechanisms, and provide referral to support services where required ▪ Maintain the mental health partnership with an independent specialist service to support the mental wellbeing of community members in impacted communities ▪ Engage proactively with Queensland Health and QPS to ensure they are well informed about the Project and are aware of any additional resources that may be available through the Project to support mental health in the affected communities ▪ Monitor the uptake of services provide as part of the partnership with PHNs
	Safety ▪ Develop a TMP with a clear focus on road safety, fatigue management and safe interactions with rural roads and rural traffic ▪ Meet with the QFES and rural fire brigades to ensure a cooperative response to any fire risks affecting the EIS investigation corridor

Health and wellbeing measures	
	▪ Meet with the Department of Education and all schools in Rosewood and Peak Crossing to: – Describe the construction schedule and the nature of road-rail interface treatments – Schedule consultation with schools in Rosewood to confirm the need for mitigation measures In the TMP, such as avoiding or minimising construction traffic in the Rosewood town centre, provision of traffic controllers near schools, speed restrictions, and avoidance of peak school traffic periods, and include relevant actions and accountabilities in the TMP – Seek a meeting with the School Principals and P&Cs to provide a Project update and explain how construction traffic will be managed – Confirm all relevant school bus services and contact details for their operators – Identify any specific considerations (e.g. off-campus activities) which should be considered in the Project's TMP – Confirm Project contact details for the contractor **Access to natural resources** ▪ In consultation with DTMR and affected landholders, confirm mitigation arrangements for direct impacts on groundwater bores ▪ Draw SRRC and DTMR attention to EIS findings regarding the Boonah to Ipswich Trail ▪ Consult with Ipswich City Council regarding any Council-planned works to upgrade facilities at the Purga Nature Reserve and the need for initiatives such as increased interpretive signage
Measures - pre-construction phase	**Social Infrastructure** ▪ Through consultation with DCDSS prior to construction commencing, and annually during construction, identify any Project-related increase in demand for community services, and if stresses on services are identified, participate in a cooperative response to community needs between DCDSS, ARTC and community organisations ▪ Provide funding through the Community Donations and Sponsorship Program to community organisations in potentially impacted communities that wish to facilitate activities, events and networks which support community cohesion ▪ In implementing the Community Wellbeing Plan and/or through the Community Donations and Sponsorship Program, fund provision of locally-based community development projects (e.g. by hall committees, sports committees and Parents and Citizens' Associations) for residents in and near the EIS investigation corridor and in potentially impacted communities to: – Build their capacity to cope with Project-related changes to connectivity, sense of place or community cohesion – Support the growth of social networks – Position local businesses to participate in the Project's supply chain – Identify and implement community events, activities, networks and services ▪ Consult with Department of Education to confirm their comfort with TMP measures regarding schools in Rosewood and Peak Crossing ▪ Provide early advice to the QPS, QAS and QFES on the Project's workforce ramp-up and offer site orientation for local police ▪ Require contractors to have adequately trained first aid staff to promote workplace health, wellness and safety, and treat personnel's minor injuries and health issues **Environmental qualities** ▪ Maintain consultative arrangements that are accessible to all residents in the EIS investigation corridor and potentially impacted communities

Health and wellbeing measures	
	▪ Provide regular updates to landholders and communities about how noise, dust and traffic delays from the Project will be minimised, and how to contact the Project ▪ Implement communication strategies to ensure stakeholders know about construction traffic routes, peak construction periods, the Project's workforce conduct policies, and how to contact the Project personnel in the event of any concerns during construction. **Access to natural resources** ▪ Establish groundwater monitoring mechanisms (refer EIS Chapter 23: Draft Outline Environmental Management Plan) to enable a corrective response or mitigation to any drawdown affecting landholder's access to groundwater ▪ Provide information to SRRC and community organisations including Bushwalkers of SEQ, Beaudesert Trail Horse Riders, Ipswich and District Trail Riders Club and the Beaudesert Bushwalkers to enable trail users to re-plan their routes in areas where horse trails are affected **Safety** ▪ Develop tailored and targeted rail and road safety programs for delivery during construction to local schools and communities in the Project region ▪ Implement communication strategies to advise stakeholders about construction traffic routes, peak construction periods, the Project's workforce conduct policies, and how to contact the Project ▪ Consult QFES in detailing the mitigation measures regarding fire trails, firefighting and a cooperative response to any fire risks affecting the EIS investigation corridor
Measures – construction phase	**Social infrastructure** ▪ Communicate with all schools, health facilities and community halls and centres in the potentially impacted communities regarding the construction program, and provide regular updates about road closures and roadworks ▪ With DCDSS, monitor the adequacy of community support services to meet Project-related demands, and enable cooperative responses if required e.g. increased funding support for affected services by ARTC or the relevant Government agencies ▪ Hold regular meetings with the QPS, QFES and QAS to update advice on the Project's workforce ramp-up, review co-operative arrangements and ensure any safety or service access issues are identified and addressed ▪ Develop a protocol between ARTC and emergency service providers, defining appropriate and coordinated responses and communication in the event of emergencies during operations ▪ Investigate the need for joint training and response exercises with QPS, QAS, and QFES to build capacity for Project- associated incident management during operation. **Mental health** ▪ With the PHNs, monitor mental health service uptake in potentially impacted communities ▪ Adjust the quantum or nature of services provided by the mental health partnership with PHNs in response to monitoring data, if required ▪ Prior to the commencement of Project operations, engage with the PHNs and Queensland Health to gauge the need for any ongoing support for mental health services during the operational period. ▪ ARTC will establish arrangements with QPS, QAS and QFES to enable cooperative responses to any incidents e.g. rail accidents, road-rail or suicides during rail operation. **Environmental qualities** ▪ Maintain consultative arrangements that are accessible to all residents in the EIS investigation corridor and potentially impacted communities

Health and wellbeing measures	
	▪ Provide regular updates to communities about how noise, dust and traffic delays from the Project are being managed and how to contact the Project. **Access to natural resources** ▪ Implement groundwater monitoring mechanisms (refer EIS Chapter 23: Draft Outline Environmental Management Plan) and any required actions to minimise drawdown on landholders' loss of access to groundwater. **Safety** ▪ Implement fatigue management procedures including in relation to travel ▪ Maintain communication strategies to advise stakeholders about construction traffic routes, construction activities, the Project's workforce conduct policies, and how to contact the Project ▪ Require contractor to implement mitigation measures with respect to managing impacts on amenity, privacy and community values (e.g. Code of Conduct, and management of noise) ▪ Provide information on train schedules which would help emergency services responders to navigate access arrangements during operations.

8.6 Local business and industry

This section addresses impacts on nearby businesses, grazing properties and tourism, and describes ARTC's commitments to ensuring that local and regional businesses benefit from the Project.

8.6.1 Impacts on local businesses

Businesses near the disturbance footprint

The Project's alignment avoid directs impacts on local business centres. Businesses which are near the footprint where amenity could be affected or road access disrupted during construction include grazing and cropping properties, poultry farms, horse spelling and dog training facilities, the IRCEC and Flinders Peak Winery.

The Project will continue to consult with businesses and work with landholders to reduce the potential for impacts on the amenity and productivity of businesses during construction (via the CEMP), and via operational management standards and through community engagement during the operations phase.

Grazing properties

The Project will require acquisition of agricultural land which may affect the operation of grazing properties. As noted in Section 7.1.2, under the AL Act, compensation for the acquisition of land is based on the market value of the land, and additional reasonable compensation costs that are a direct consequence of the resumption of the land are also considered.

ARTC is working with directly affected landholders to develop and implement property-specific measures to mitigate impacts on properties which could affect farming/grazing businesses and the livelihoods and employment they support. This has included identifying:

- Landholders' needs regarding access to the properties and the closure of private roads
- Property infrastructure such as fences and dams which would be affected and need to be addressed as part of compensation arrangements with the Constructing Authority
- The potential for changes to groundwater access.

This will inform development of the detailed design and CEMP. The Project is committed to ongoing cooperation with all directly affected landholders to minimise impacts on agricultural properties.

The Project is also consulting with landholders whose land is located adjacent to the disturbance footprint, to identify and address any impacts on property access, the potential for noise impacts or changes to cross-corridor connectivity.

Tourism

Minimal demands for short term workforce accommodation are expected. As part of developing the AMP, ARTC will require the contractor to consult with the Scenic Rim Tourism Association and the Ipswich Tourism Operators Network to confirm peak demand periods (noting these may change from year to year in response to major event schedules) and seasonal demands on tourism accommodation, to avoid displacement of tourists and events visitors. This will include discouraging workforce use of caravan parks in the Project region.

The Ipswich Motorsport Precinct is a major contributor to the Ipswich LGA's events calendar and tourism visitation numbers and could be impacted by noise or traffic disruptions during construction. With multiple lessees and event managers involved, the precinct's event calendar changes from year to year. During the detailed design phase the Project will consult with ICC (and if advised by ICC, other stakeholders) to forecast the Precinct's event schedule during the construction phase, and identify feasible measures such as scheduling of noisy works or works which would disrupt access to the Precinct to avoid conflicting with major events, for inclusion in the CEMP. Use of Champion's Way and the Cunningham Highway will also be discussed with ICC and DTMR, to inform the Project's TMP. Consultation between the Project and ICC will be maintained throughout the period in which construction works are occurring within 500 m of the Precinct.

There is potential for changes to the road network or scenic amenity to affect tourist's enjoyment of the Project region's values. During the detailed design phase, the Project will consult with tourism-related businesses located within 5 km of the Project to ensure there is a full understanding of how impacts resulting from road works, changes to the road network or noise/vibration may affect businesses. The Project will then develop a strategy, working with any affected tourism landholders, Scenic Rim Tourism Association, Ipswich Tourism Operators Network, ICC and SRRC, to mitigate impacts on tourism values. This may include support for promotional and marketing campaigns during the construction period.

8.6.2 Local and Indigenous business participation

ARTC is committed to providing full, fair and reasonable opportunities for capable local businesses (within the Project region) to compete and participate in the Project's supply chain, to be achieved as follows.

Australian Jobs Act requirements

The Inland Rail Program is subject to the *Australian Jobs Act 2013* (Cth) requirement to develop an Australian Industry Participation (AIP) Plan. This plan identifies how ARTC and its supply chain will provide Australian entities with full, fair and reasonable opportunity to bid for the supply of key goods or services. A key requirement in delivering upon the Program's commitment is to ensure that ARTC commitments cascade through the supply chain and contractors understand their requirements.

ARTC will work with its various service providers, consultants and contractors in their implementation of the AIPP. As part of implementing the AIPP, ARTC expects that its contractors and operators will:

- Ensure that commitments made within the Inland Rail AIPP are implemented by ARTC and its supply chain
- Prepare an Industry Participation Plan during the tender stage for implementation during construction

- Implement a clear and efficient process for businesses to source information about the project and potential supply opportunities, and to register their interest
- Ensure all procurement entities have a detailed understanding of business capability/ capacity of the study area and region before seeking bids to supply
- Ensure design specifications take account of Australian standards and, where international standards shall be used, provide avenues for Australian entities to identify how they can comply
- Include local and Indigenous content criteria and clauses in project procurement processes and contract documents.
- Report on local and Indigenous industry participation outcomes.

The contractor will be required to identify how they intend to comply with the Inland Rail AIP Plan and Australian Jobs Act 2013 (Cth) requirements. Contractors will also be required to prepare and submit to ARTC an AIP Compliance Report every three months in the format prescribed by the AIP Authority.

The Project will report on supplier participation at the following levels:

- Local community: referring to spend within the Ipswich and Scenic Rim LGAs
- Region: referring to spend with businesses located within 125 km of the Project
- State: referring to spend within Queensland
- 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.

Sustainable Procurement Policy

ARTC will implement its Sustainable Procurement Policy for the Project, providing details on opportunities, outcomes and strategies for local and Indigenous business participation in the Project's construction and operations phases. The Sustainable Procurement Policy commits that environmental, community and economic considerations will be embedded in the procurement process and Inland Rail will, wherever possible:

- Require suppliers to provide details of their environmental and sustainability policies and implementation during the tender phase
- Apply sustainability metrics to the evaluation of tenders received (including environmental, social and economic considerations)
- Choose suppliers and products with demonstrable positive environmental and social impacts
- Support procurement from local and indigenous businesses and suppliers
- Procure products and encourage our suppliers to procure products that have recognised environmental labels or are from sustainable supply chains
- Assess the program using the Infrastructure Sustainability rating scheme and target a strong performance for the scheme's procurement credits
- Commit to continuous improvements by reviewing our procurement outcomes and reviewing and updating the policy and appropriate procedures
- Communicate the policy to the public.

Business capability

The Project region and adjacent LGAs have significant existing capacity for involvement in major construction projects. In support of business capability development within the Ipswich and Scenic Rim LGAs, ARTC:

- Is working with the two Councils' RSIS coordinators to align skills training programs with RSIS priorities
- Has engaged and will continue to engage with DSDTI and DESBT to discuss existing and future needs for skills training in the Project region, and to identify DSDTI and DESBT programs which will support individuals and businesses to be ready for opportunities associated with supply of goods, services, materials and labour to Inland Rail Projects.

Will continue to engage with DSDTI and the Industry Capability Network to collaborate on business capacity development in the Project region to prepare small to medium businesses to participate in major projects, including Inland Rail Is working with DITRDC to align Project initiatives with DITRDC's regional development initiatives. As part of AIP Plan requirements, the contractor will be required to contribute to building ICC and SRRC business capability including:

- Providing advance notice of supply opportunities
- Working with supplier advocates to promote supply opportunities and identify capable suppliers
- Hosting and/ or participate in supplier briefing and networking events
- Collaborating with government and industry stakeholders to develop and implement training and mentoring support that builds business capability
- Providing support to local and Indigenous businesses and social enterprises which enables them to understand the requirements of supplying to Inland Rail
- Providing formal feedback to suppliers that are unsuccessful in prequalification and/ or tendering.

Indigenous employment and business supply

ARTC is committed to ensuring that Indigenous businesses, including those located in the Project region, are identified and supported to participate in the Project's supply chain.

ARTC is working with Traditional Owners and DATSIP to ensure that Indigenous community members benefit from Project employment and business supply opportunities. Opportunities which are being explored with Traditional Owners and other Indigenous and government stakeholders include:

- Potential for a partnership between Yuggera Ugarapul People and Inland Rail to identify and implement opportunities for Indigenous people to get skills and work experience prior to Inland Rail construction commencing
- Identification of existing business capacity within the Yuggera Ugarapul and Jagera Daran communities, and helping them to identify business capacity building programs to be supported by ARTC, DATSIP and/or DITRDC
- Information exchange regarding businesses within the Yuggera Ugarapul community, Jagera Daran community and the Project region, and the business offerings and skills that contractors require, in support of the development of capacity building programs
- In cooperation with DATSIP and CSQ, identification of specific training programs (skills development, traineeships and apprenticeships) for Indigenous people, to be implemented as part of the Inland Rail Skills Academy.

8.6.3 Business and industry opportunities development

The Inland Rail Program is a nationally significant transport initiative and will provide a high-capacity freight link between Melbourne and Brisbane through regional Australia to better connect cities, farms and mines via ports to domestic and international markets.

The Inland Rail Business Case (ARTC 2016) identified several benefits which would support regional economic development, including improved linkages and reduced distances travelled within the national freight network; improved access to and from regional markets; and reduced rail costs. It will also allow for improved reliability and greater certainty for freight travelling between Melbourne and Brisbane and anywhere within the Inland Rail alignment.

To assist regional businesses to prepare for Inland Rail once construction is complete, ARTC Interstate Network has a dedicated Business Development Manager to work with potential customers, rail freight owners, terminal owners and industry stakeholders. The Business Development Manager acts as a conduit to ARTC to support businesses as they consider rail solutions for their operations and has a dual focus: to explain and inform businesses how Inland Rail and ARTC's network will work, and to work with businesses and industry one-on-one, to understand where there may be opportunities to put freight on rail when Inland Rail is operational post 2026.

The Inland Rail Business Case (Ibid.) notes that Inland Rail would be a catalyst for complementary supply chain investments, including fleet upgrades, new metropolitan and regional terminals and integrated freight precincts, as well as the potential for creation of new and expanded regional industries. The Project may act as a significant catalyst for development within the Project region, e.g. within the Ebenezer Industrial Estate and/or Bromelton SDA in relation to rail dependent industries and/or support industries associated with transport, freight handling, warehousing and logistics.

8.6.4 Action plan

Table 8-12 provides the objectives, outcomes, ARTC commitments and management measures for mitigation of impacts on businesses, and measures for ensuring local and Indigenous business participation in the Project.

Table 8-12: Local business and industry

Local business and industry participation measures	
Objective	▪ Minimise impacts on farming, agribusiness, tourism businesses and businesses in towns ▪ Create local business awareness about supply opportunities and registration and contracting processes for the Project .and build relationships with local businesses to support their involvement in the Project ▪ Provide a framework to ensure that local, regional and Indigenous businesses are provided full, fair and reasonable opportunity' to participate in the supply of goods and services on Inland Rail, and integrate this framework into construction tender requirements and contracts.

Local business and industry participation measures	
Outcomes	▪ Impacts on businesses including farms and grazing operations are minimised through the implementation of measures outlined in the Project's Draft Outline Environmental Management Plan in cooperation with landholders and business owners ▪ Businesses in the SIA study area benefit from supply opportunities ▪ The Project engages Indigenous businesses in its construction phase and supports Indigenous businesses to develop capacities for supply to the Project's operation and/or other construction projects ▪ Any cumulative labour draw impacts on local business are identified to enable refinements to recruitment or training strategies.
ARTC Commitments	▪ Inland Rail's AIPP and Sustainable Procurement Policy will be implemented for the Project ▪ Access to services and businesses during construction will be maintained. Where alternative access arrangements are required, these will be developed in consultation with relevant landholders ▪ Indigenous participation and local participation will be included as key elements of construction tender assessments and ARTC work closely with contractors to achieve agreed outcomes ▪ A clear and efficient process for businesses to seek information about opportunities and register their interest in Project supply is provided ▪ ARTC will work with DESBT, DITRDC and local and Indigenous businesses to: – Build businesses' capacity to participate in the Project's supply chain through business development, mentoring and pre-qualification projects – Support Indigenous businesses to ensure they are prepared for and provided with opportunities to participate.
Measures - detailed design phase	**Impacts on nearby businesses** ▪ Continue to consult with businesses in and near the EIS investigation corridor, including poultry farms, horse spelling and dog training facilities, the IRCEC and Flinders Peak Winery, to identify any measures required to reduce impacts on their amenity or on road access which could be considered as part of the CEMP or construction methodology. **Impacts on agricultural businesses** ▪ Communicate with affected agricultural landholders to explain the land resumption process and/or the result of EIS studies on noise and dust, as relevant ▪ Consult with agricultural landholders within the EIS investigation corridor and ensure an appropriate level of access is maintained for agricultural businesses across and between properties directly affected by the Project, to minimise impacts on the movement of stock, water, produce and equipment ▪ Work with directly affected landholders to develop cooperative strategies which will reduce impacts on grazing, cropping businesses or other agribusinesses, which may include, as relevant: – property access and communication protocols – design measures to mitigate impacts on groundwater bores, fences, stock/product movements or water access – surface and/or groundwater management – erosion control – noise and vibration mitigation – weed and pest management.

Local business and industry participation measures	
	Impacts on tourism ▪ Engage with the IRCEC and Flinders Peak Winery to communicate EIS findings, and if necessary and feasible, refine strategies to mitigate noise or visual amenity impacts on these properties during construction ▪ Consult with tourism-related businesses (wineries, accommodation facilities, farm stays, restaurants, cafes and specialty shops) located within 5 km of the Project to: – Explain the Draft Outline Environmental Management Plan TMP and CEMP provisions and accept feedback on measures of relevance to tourism and related businesses – Identify any additional, feasible strategies which would reduce or offset impacts on connectivity or businesses' amenity during construction and/or operation ▪ Discuss local marketing and/or business development initiatives which ARTC could support to offset impacts on tourism during construction. ▪ Consult with ICC (and if advised by ICC, other stakeholders) to forecast the Ipswich Motorsports Precinct's event schedule during the construction phase, and identify feasible measures such as scheduling of noisy works or works which would disrupt access to the Precinct during major events ▪ Consult ICC and DTMR regarding use of Champion's Way and the Cunningham Highway to inform the Project's TMP **Local and Indigenous supply opportunities** ▪ Work with Traditional Owner groups to identify existing business capacity within the Yuggera Ugarapul and Jagera Daran communities, and help them to identify business capacity building programs to be supported by ARTC, DATSIP and/or DITRDC ▪ Communicate pre-qualification requirements to businesses in the Ipswich and Scenic Rim LGAs contracts to allow local and regional businesses to achieve the relevant requirements ▪ Continue consultation including Project briefings with businesses and business groups, to identify local businesses, their capacity and how they can be supported to prepare for involvement in the Project ▪ Facilitate the delivery of workshops with businesses aimed at building their capacity for involvement in major project construction, associated services and Bromelton SDA ▪ Liaise with the following stakeholders to locate specific business capacities of relevance to the Project's supply chain: – DITRDC – RDA – Chambers of Commerce in the Ipswich and Scenic Rim LGAs ▪ Include specific details on opportunities and outcomes for local and Indigenous business participation in the Project's implementation plan for the AIPP ▪ Complete a scan of Indigenous businesses in South East Queensland which could service the Project and develop an Indigenous business register to be used by the contractor and Project operators.
Measures - pre-construction phase	**Impacts on nearby businesses** ▪ Implement any measures identified in consultation with businesses in and near the EIS investigation corridor to reduce impacts on their amenity or road access, as relevant to the pre-construction period

Local business and industry participation measures	
	Impacts on agricultural businesses ▪ Complete and where relevant to pre-construction, implement property-specific measures to mitigate impacts on agricultural land use, property access, water infrastructure or access, other farm infrastructure or farm management ▪ Where drawdown impacts are anticipated in bores that would not otherwise be decommissioned by the Project, the contractor will engage with each licensed user to determine and agree an appropriate mitigation approach **Impacts on tourism** ▪ Develop measures, working with Scenic Rim Tourism Association, the Ipswich Tourist Operators Network, ICC and SRRC, to mitigate any impacts on tourism during the construction stage (e.g. changes to scenic amenity or travel times), e.g. through support for promotional and marketing campaigns during the construction period **Local and Indigenous supply opportunities** ▪ Provide updates to local and regional businesses to ensure they have access to current information about the Project ▪ Communicate pre-qualification requirements to businesses in the Project region to allow local and regional businesses to achieve the relevant requirements ▪ Facilitate the delivery of workshops with businesses aimed at building their capacity for involvement in major project construction and associated services ▪ Encourage tenderers for construction contracts to set appropriate targets and/or incentives to utilise local and Indigenous businesses ▪ Work with RDA and the Ipswich and Scenic Rim Chambers of Commerce, to encourage relevant supply chain development, especially for Indigenous businesses ▪ In consultation with landholders, ensure an appropriate level of access is maintained for agricultural businesses across and between properties affected by the Project, and to the roads which link them to markets.
Measures – construction phase	**Impacts on nearby businesses** ▪ Implement any measures identified in consultation with businesses in and near the EIS investigation corridor to reduce impacts on their amenity or road access, as relevant to the construction period **Impacts on agricultural businesses** ▪ Maintain regular engagement with landholders and business owners adjacent to the temporary disturbance footprint (at least quarterly during the first year of construction or as agreed with landholders) to monitor the effectiveness of environmental and social impact mitigation measures ▪ Provide regular Project updates which forecast road works, road realignments and closures, and explain alternative routes, to landholders and potentially impacted communities (including residents of rural localities). **Impacts on tourism** ▪ Maintain consultation with ICC and any identified stakeholders within the Ipswich Motorsports Precinct throughout the period in which construction works are occurring within 500 m of the Ipswich Motorsports Precinct or affecting Champion's Way or the Cunningham Highway of this vicinity, the review the effectiveness of mitigation measure and if necessary, develop corrective measures ▪ Implement measures agreed with Scenic Rim Tourism Association, Ipswich Tourist Operators Network and the Ipswich and Scenic Rim Councils to mitigate impacts on tourism during the construction stage

Local business and industry participation measures	
	▪ Through the Project's CRG, provide feedback to community members on the implementation of proposed measures to reduce the visual impact of rail infrastructure during operation, and seek their feedback. **Local and Indigenous supply opportunities** ▪ Implement the Project's AIPP to maximise local industry opportunities during the construction phase ▪ Implement capacity building strategies identified in cooperation with stakeholders during the detail design and pre-construction stages ▪ Promote Government services and programs which are available to businesses considering investment in projects related to Inland Rail.

8.7 SIMP monitoring, review 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 the effectiveness of mitigation and benefit enhancement measures.

The monitoring framework for community and stakeholder engagement is provided as part of the Community and Stakeholder Engagement Plan in Section 8.2. The monitoring framework provided in **Table 8-13** outlines for each of the other four SIMP sub-plans:

- Impacts addressed
- Desired outcomes
- Performance measures
- Monitoring mechanisms and data sources, including stakeholder engagement in monitoring
- Monitoring frequency during construction.

ARTC will track SIMP implementation and review performance measures quarterly (where information is available), to facilitate continual improvement of strategies and practices.

SIMP implementation will be reported to the CRG at each meeting and a report against performance measures will be presented to the CRG, ICC and SRRC annually during construction.

The SIMP will be reviewed annually during the construction phase, and where necessary updated based on monitoring results, including stakeholder feedback. This will include a process for reviewing social impact management and benefit enhancement measures to assess whether they are still appropriate, and whether any new issues or initiatives have emerged that should be included in ongoing mitigation measures and/or monitoring.

A review of the SIMP and its implementation will be undertaken by an independent third party by the end of Year 1 of construction and prior to commissioning the Project. These reviews will include consultation with ICC, SRRC, community members (through the CRG during construction) and Queensland Government agencies. The independent SIMP reviews will identify the effectiveness of SIMP strategies, and any changes which need to be made to the SIMP to ensure ongoing effectiveness.

The monitoring program will be reviewed prior to operations, revised to recognise the completion of construction, and implemented as relevant for the operations phase.

As described in Section 8.1.1, prior to completion of the construction phase, ARTC will develop a SIMP for the operational phase in accordance with ARTC's established management frameworks for rail operation. The operational SIMP will be independently reviewed in Year 3 of operations, to support consideration by ARTC and the OCG regarding any future need for the SIMP.

Proposed roles for Councils in SIMP implementation and monitoring include:

- Involvement in the development of the Community Wellbeing Plan and the draft AMP
- Cooperation in joint initiatives with ARTC
- Requests for provision of feedback six monthly during construction on:
  - The results of initiatives to offset impacts on amenity, character and cohesion
  - Any Project use of housing or short term accommodation
  - Local procurement outcomes
- Review of annual SIMP reports
- Participation in annual SIMP reviews
- Participation in independent review of the SIMP at the end of Year 1, prior to commissioning and during Year 3 of operations.

Proposed roles for CRG members in monitoring include:

- Receiving reports on SIMP implementation at each CRG meeting, and on AMP implementation on a six monthly basis, for their feedback
- Providing feedback on the effectiveness of community and stakeholder engagement measures at each CRG meeting
- Receiving and providing feedback on annual SIMP reports
- Participation in annual SIMP reviews.

Table 8-13: Social monitoring framework

Impacts/benefits addressed	Outcomes	Performance Measures	Mechanisms	Monitoring Frequency
Workforce				
▪ Local and Indigenous employment opportunities ▪ Training and development opportunities ▪ Workforce behaviour /community safety ▪ Employment in other industries ▪ Skills shortages	▪ Local contractors and job seekers (from within the Project region) are involved in the Project construction workforce	▪ Number of people from the Project region that are employed in construction, in line with targets agreed between ARTC and the contractor	▪ Contractor's construction employment register will enable identification of the percentage of personnel living in the Project region	Quarterly
	▪ Training partnerships strengthen workforce capacity for Project employment and other industries	▪ Number of trainees and apprentices involved in construction work ▪ Number of people from the Project region involved in training opportunities facilitated by the Project ▪ Traineeship completion/retention rate	▪ Contractor's trainee and apprenticeship register ▪ ARTC's Inland Rail Skills Academy monitoring process in cooperation with training partners	Annually
	▪ Construction employment opportunities are available to Yuggera Ugarapul People and other local Indigenous people	▪ Number of Indigenous people involved in construction employment, in line with targets agreed between ARTC and the contractor	▪ Contractor's construction employment register, identifying employees and contractor's Indigenous identification, by agreement with personnel	Quarterly
	▪ Project personnel behave with respect and courtesy towards residents, landholders and motorists	▪ Number of substantiated complaints regarding workforce behaviour	▪ Contractor monitoring of Code of Conduct implementation and compliance ▪ Complaints register ▪ CRG feedback	Monthly – complaints register Quarterly - CRG

Impacts/benefits addressed	Outcomes	Performance Measures	Mechanisms	Monitoring Frequency
	▪ Workplace health and safety are supported through a strong workforce safety culture	▪ Implementation of contractor's Work Health and Safety Plan ▪ Lost Time Incident rate in comparison to relevant national standard	▪ Project Work Health and Safety Records	Monthly
	▪ Impacts on agricultural and tourism employment opportunities are minimised	▪ Management measures for agricultural properties are implemented in accordance with agreements with landholders, to minimise impacts ▪ Major community events' attendance rates ▪ Tourism industry feedback does not identify displacement of tourists from short term accommodation	▪ Contractor engagement with landholders in the EIS investigation corridor to monitor the effectiveness of management measures ▪ Community Relations Monitor ▪ Contractor engagement with Scenic Rim Tourism Association and Ipswich Tourism Operators Network to monitor any changes to event attendance or demands on tourism accommodation	Six monthly
Housing and accommodation				
▪ Potential for cumulative demands to impact on housing access and affordability ▪ Potential to displace tourists or community event visitors from tourist accommodation ▪ Concern about property values	▪ Project workforce demands for accommodation do not result in displacement of local residents from rental housing ▪ Any workforce accommodation demands are managed to avoid displacement of tourists from accommodation in the Ipswich and Scenic Rim LGAs	▪ Changes in the availability or cost of rental housing in the Project region are not attributable to Project demand	▪ Contractor will monitor Project workforce accommodation use, rental vacancy rates and price trends in the Ipswich and Scenic Rim LGAs (Pricefinder/SQMResearch data) ▪ ARTC will monitor the effectiveness of the AMP, in consultation with DHPW, ICC and SRRC, including requests for provision of Councils' feedback regarding any housing/accommodation use	Quarterly during first two years of construction (during which workforce numbers will peak) Six monthly during ensuing construction period

Impacts/benefits addressed	Outcomes	Performance Measures	Mechanisms	Monitoring Frequency
	▪ Any workforce accommodation demands are managed to avoid displacement of tourists from accommodation providers in the Ipswich and Scenic Rim LGAs	▪ Hotel/motel operators report adequate capacity for tourist trade in the Project region	▪ Contractor will consult with Ipswich Tourism Operators Network and Scenic Rim Tourism Association to identity occupancy baseline at commencement of construction, and to monitor and enable management of any potential to displace tourists	Six monthly during first two years of construction
	▪ Accommodation providers in the Project region benefit from any Project requirements for workforce accommodation	▪ Workforce accommodation solutions include accommodation providers in the Project region	▪ Accommodation register ▪ Consultation with providers of accommodation used by Project personnel to identify effects on occupancy rates	Quarterly during first two years of construction (during which workforce numbers will peak)
Community health and wellbeing				
▪ Impacts of noise on lifestyles/sleep ▪ Increased demands for health, community support and/or emergency services ▪ Impacts on mental health through stress and anxiety related to the Project ▪ Impacts on community/traffic safety, or emergency vehicle responses	▪ Changes in the amenity of residential properties and the potential for noise to disturb sleep are minimised in accordance with the Project's approval conditions and measures agreed with affected landholders	▪ Noise and air quality impacts are managed in accordance with Project approval conditions and the CEMP approved by ARTC ▪ Complaints regarding noise or dust are resolved in cooperation with the affected landholders	▪ Complaints register ▪ CRG feedback ▪ Community Relations Monitor	Quarterly
	▪ Vulnerable residents who need to relocate or are affected by Project-related stressors are supported to adapt to changes	▪ Landholders in and adjacent to the EIS investigation corridor have access to timely Project information and an established Project contact ▪ Residents experiencing stress or distress in relation to Project-	▪ Community Relations Monitor ▪ CRG feedback ▪ With DCDSS, ARTC or the contractor monitor the adequacy of community support services to meet Project-related and cumulative demands on support services, and enable cooperative	Six monthly

Impacts/benefits addressed	Outcomes	Performance Measures	Mechanisms	Monitoring Frequency
▪ Community benefits for participation in Project employment, supply chain or community initiatives supported by the Project		related changes have access to support services	responses if required e.g. funding support for affected services by the ARTC, the Project or the relevant Government agencies	
	Mental health and community support services are accessible to people in potentially impacted communities and are adequate to any increased demand resulting from the Project	▪ Increased ARTC support for mental health/community support services if consultation with the PHNs or Queensland Health identifies the need to supplement existing services provided through the mental health partnership with PHNs ▪ Community Donations and Sponsorship-funded projects have desirable benefits for local community members	▪ With the PHNs, ARTC will monitor mental health service uptake in potentially impacted communities ▪ ARTC or the contractor will consult with DCDSS in identifying any Project-related stress on community services and organisations in the Project region, to enable cooperative responses if required e.g. increased funding support ▪ CRG feedback on the benefits of community projects funded	Quarterly – with PHNs Annually – with DCDSS and CRG
	▪ Government agencies providing health, police and emergency services have adequate information and cooperation from the Project to enable planning for increased/changing demands	▪ Queensland Health, QPS, QAS and QFES confirm that ARTC's advice on workforce ramp-up and cooperative arrangements are adequate to support planned responses, including measures to manage any changes to emergency vehicle response rates	▪ ARTC or the contractor will consult regularly, to a schedule agreed with Queensland Health, QPS, QAS and QFES ▪ Requests for provision of Councils' feedback regarding community needs six monthly during construction	Quarterly during the first two years of construction
	▪ Project has a strong focus on traffic safety, including specific measures for school bus routes	▪ School bus operators confirm suitability of Draft Outline Environmental Management Plan /CEMP measures relevant to school bus routes	▪ Contractor or ARTC will engage with Department of Education and school bus operators to review measures, annually ▪ QPS feedback	Annually – Department of Education and QPS Monthly – traffic accidents

Impacts/benefits addressed	Outcomes	Performance Measures	Mechanisms	Monitoring Frequency
		▪ Number of traffic accidents involving Project sites/vehicles/personnel	▪ Project Work Health and Safety records	
	▪ The wellbeing of residents in the Project region is supported by access to Project employment, workforce skills development, participation in the Project's supply chain and Project cooperation in initiatives to support community wellbeing	▪ Workforce monitoring data confirm that Project region residents are participating in training, the construction workforce (refer measures above for Workforce management) and the supply chain	▪ Contractor's construction employment and training register recording employees and contractor's postcodes ▪ AIPP records ▪ Requests for provision of Council feedback six monthly during construction on the results of initiatives to offset impacts on amenity, character and cohesion	Quarterly Six-monthly
	▪ Loss of access as groundwater bores in the disturbance footprint or any Project-related groundwater water drawdown affecting bores are mitigated	▪ Landholders' access to water is equivalent to pre-Project levels	▪ Contractor will undertake groundwater monitoring and implement any required mitigation arrangements in accordance with Groundwater Management Plan	In accordance with Groundwater Management Plan, when developed

Impacts/benefits addressed	Outcomes	Performance Measures	Mechanisms	Monitoring Frequency
Local business and industry				
▪ Impacts on agricultural properties ▪ Potential deterrence of tourists ▪ Local and Indigenous business opportunities ▪ Draw of labour from local businesses	▪ Impacts on businesses including farms and grazing operations are minimised through the implementation of measures outlined in the Project's Draft Outline Environmental Management Plan in cooperation with landholders and business owners	▪ Ongoing engagement with directly affected landholders and business owners supports adaptive management of impacts on farms, businesses and grazing operations ▪ Tourism visitation rates are monitored and promotional strategies supported if Project impacts on visitation are confirmed	▪ Contractor will engage with landholders (to schedules agreed with landholders) to monitor the effectiveness of management measures relevant to on-property or road access impacts ▪ Contractor will consult with Ipswich Tourism Operators Network and Scenic Rim Tourism Association to identify any decreases in visitation established as attributable to the Project	Annually during construction
	▪ Businesses in the SIA study area benefit from supply opportunities	▪ Demonstrated alignment of major contracts and contractors to the Project's AIPP ▪ Number and value of contracts with businesses located in the Ipswich and Scenic Rim LGAs as a percentage of all supply contracts for the Project ▪ Number and value of contracts with Indigenous businesses in the Ipswich and Scenic Rim LGAs, as a percentage of all supply contracts for the Project ▪ Percentage of expenditure in the Project region compared to overall annual Project expenditure for construction	▪ Contractor's supplier register will identify involvement of businesses located in the Project region to enable reporting ▪ Contractor procurement records will be maintained to enable reporting of contract value ▪ Requests for provision of Council feedback on local procurement outcomes	Quarterly Six monthly during construction

Impacts/benefits addressed	Outcomes	Performance Measures	Mechanisms	Monitoring Frequency
	▪ The Project engages Indigenous businesses in its construction phase and supports Indigenous businesses to develop capacities for supply to the Project's operation and/or other construction projects	▪ Number and value of contracts with Indigenous businesses in the Goondiwindi and Toowoomba LGAs, as a percentage of all supply contracts for the Project	▪ Contractor's supplier register and procurement records will identify involvement of Indigenous businesses to enable reporting	Quarterly
	▪ Any cumulative labour draw impacts on local business are identified to enable refinements to recruitment or training strategies	▪ ARTC monitors labour draw from local business and initiates corrective actions to recruitment and training strategies if labour draw is identified as affecting local businesses	▪ The Project will consult with ICC, SRRC, DESBT and Chambers of Commerce in the Project region regarding any pressures they identify on local labour/skills availability, to enable refinement of recruitment and training strategies if local labour shortages are identified	Six monthly

9 Impact assessment

This section summarises the significance of social impacts and benefits for local communities and stakeholders in the SIA study area. It considers:

- The likelihood that social impacts and benefits will occur
- The consequence of social impacts and benefits for those affected
- The potential risk of impacts to social conditions (such as residential amenity or access to services) and the significance of community benefits, prior to the application of management measures as detailed in Section 8
- The risk of residual impacts after mitigation measures are applied (further discussed in Section 10).

Table 9-1 provides the social risk assessment ratings, which consider the likelihood and consequence of impacts and benefits.

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

'Consequence', as defined in **Table 9-2**, has been assessed based on how the social impact may be experienced by the relevant stakeholders, considering:

- The duration of impacts and benefits, being either short term (during construction) or long term (during operation)
- Sensitivity, including specific vulnerabilities and resilience to impacts
- The severity of potential effects on stakeholders and magnitude of potential benefits.

Table 9-1: Social risk assessment ratings

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

Significance of Social Impact Ratings							
	Low		Medium		High		Extreme
	Project benefits and opportunities						

Source: NSW DP&E 2017.

Table 9-2: Consequence criteria

Rating	Impact (-)	Benefit (+)
Minimal	Local, small-scale, easily reversible change on social characteristics, or the values of the community, or communities/stakeholders can easily adapt or cope with change	Local small-scale opportunities emanating from the Project that the community can readily pursue and capitalise on
Minor	Short-term (1-3 years) recoverable changes to social characteristics and values of the community or stakeholders, or the communities/stakeholders have substantial capacity to adapt and cope with change	Short-term opportunities emanating from the Project
Moderate	Medium-term (4-10 years) recoverable changes to social characteristics and values of the of the community or stakeholders, or the communities/stakeholders have some capacity to adapt and cope with change.	Medium-term opportunities emanating from the Project
Major	Long-term (more than 10 years) recoverable changes to social characteristics and values of the of the community or stakeholders, or the communities/stakeholders have limited capacity to adapt and cope with change	Long-term opportunities emanating from the Project
Catastrophic	Irreversible changes to social characteristics and values of the community or stakeholders, or the communities/stakeholders have no capacity to adapt and cope with change.	N/A

Source: Adapted from Department State Development, Infrastructure and Planning (Qld.) Social impact assessment guideline July 2013.

Table 9-3 summarises:

- Potential social impacts and benefits as a result of the Project,
- Stakeholders potentially affected
- A preliminary evaluation of the significance of potential social impacts and benefits, after considering ARTC's existing commitments
- Project-specific social management measures (noting further detail is provided in Section 8)
- An evaluation of residual significance, in consideration of Project-specific measures which aim to reduce the likelihood or the consequence of impacts on communities and stakeholders.

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.

Community adaptation to social impacts such as changes to connectivity, community cohesion or amenity may take some time. Evaluation of residual significance (after Project-specific mitigation measures are applied) has assumed:

- A timeframe of up to five years from commencement of construction during which community members and networks will generally adapt to environmental and social changes
- That the Project-specific mitigation measures (as refined with stakeholders and in response to social monitoring data) will be effective in reducing the level of impacts experienced.

Symbols used include:

- +, denoting positive impact
- -, denoting negative impact.

Project phases are shown as:

- Construction (C), which includes pre-construction, and represents a period of up to four years
- Operation (O), which represents a period of up to 100 years
- C/O, denoting impacts which commence in construction and continue for the Project's life.

Table 9-3: Social impacts and benefits

Impact area	Impact description	Phase	Nature	Stakeholders affected	Prelim risk	Project-specific strategies	Residual risk
Communities and stakeholders							
Indigenous values	The Project will introduce additional linear infrastructure to the landscape, contributing to cumulative impacts on Indigenous peoples' feeling of connection with Country. The disturbance footprint may impact on one Reserve property requiring agreement on native title	C/O	-	Yuggera Ugarapul People, other Indigenous people	B4	▪ Cultural tours for the Project team to increase awareness of cultural sites and landscapes ▪ CHMP implementation ▪ Cooperation with Yuggera Ugarapul People with respect to any further cultural heritage surveys required	B3
Property ownership	Freehold land would be acquired to accommodate the Project, and tenanted DTMR-owned dwellings in the SFRC would be removed, resulting in the potential for relocation of an estimated 60 households. Acquisition discussions have caused stress and anxiety for some landholders and the need to relocate will disrupt family circumstances and community networks.	C/O	-	Directly affected landholders and tenants	A3	▪ Compensation under the AL Act ▪ Information about the timing and process for land acquisition to affected landholders, to assist their planning ▪ Facilitation of assistance to residents who need to relocate, to support their adjustment ▪ Property-specific management measures for properties with partial acquisitions	A2
Disadvantage	The removal of dwellings on DTMR-owned properties in the SFRC may displace tenants who will require affordable housing. Noise and changes to rural character near the disturbance footprint may affect the amenity of people who are experiencing disadvantage.	C	-	Directly affected landholders and tenants	B3	▪ Information to Constructing Authority regarding household circumstances and wishes identified in EIS consultation	B2

Impact area	Impact description	Phase	Nature	Stakeholders affected	Prelim risk	Project-specific strategies	Residual risk
						▪ Partnerships with organisations that can provide services for directly affected households if required, to support their relocation and adjustment to new circumstances ▪ Funding through the Community Donations and Sponsorship Program for projects that will support community cohesion	
Amenity	Noise and dust from track construction may be intrusive on the quiet rural amenity of homes near the temporary and permanent disturbance footprint but would be transitory as works move along the alignment.	C	-	Nearby landholders and residents	A2	▪ Management measures as outlined in EIS Chapter 23: Draft Outline Environmental Management Plan and as detailed in the CEMP ▪ Engagement with residents in and near the EIS investigation corridor to monitor and if necessary, refine the effectiveness of mitigation measures	A1
	Noise, dust and/or increased traffic related to laydown areas and construction of bridges may disturb residential amenity for longer periods.	C	-	Nearby landholders and residents	A3	▪ Management measures as outlined in EIS Chapter 23: Draft Outline Environmental Management Plan and as detailed in the CEMP and Noise and Vibration Sub-Plan ▪ Consult with nearby landholders to identify sensitivities and potential mitigation measures for consideration in CEMP	A2
	Construction of the Teviot Range tunnel would involve blasting may cause noise or vibration which frightens people or stock.	C	-	Nearby landholders	A2	▪ Meet with landholders within 2 km of tunnel to discuss tunnel construction schedule particularly in relation to any blasting	A1

Impact area	Impact description	Phase	Nature	Stakeholders affected	Prelim risk	Project-specific strategies	Residual risk
	The railway noise levels are below the assessment criteria where sensitive receptors are generally located 400 m or more from the rail alignment. At Project opening in the year 2026, there are 59 sensitive receptors where the predicted railway noise levels have triggered the investigation of noise mitigation measures. An additional six sensitive receptors triggered investigation of noise mitigation for the design year of 2040 (a total 65 receptors) triggering a review of mitigation.	O	-	Nearby landholders	A4	▪ Property-specific noise mitigation measures agreed with landholders where exceedances trigger mitigation measures ▪ Complaints mechanism	A3
Connectivity and travel behaviour	Crossing construction, roadworks and bridge construction may affect ease of travel and travel times e.g. for Cunningham Highway as a major commuter and long-distance route, and Ipswich-Boonah Road as a major connector across the Project region. Road re-alignments and temporary road closures may result in increased travel times.	C	-	Residents, businesses, service providers and visitors QPS, QFES, QAS, SRRC, ICC, DTMR	A3	▪ Community information regarding construction schedule and roadworks ▪ Travel safety communication strategy ▪ Management measures as outlined in EIS Chapter 23: Draft Outline Environmental Management Plan and as detailed in the TMP	A2
	Cumulative increases in traffic volumes if construction or spoil management traffic routes are shared by more than one Project, which could affect traffic safety and ease of travel.	C	-	Residents, businesses, service providers and visitors QPS, QFES, QAS, SRRC, ICC, DTMR	C3	▪ TMP ▪ Travel safety communication strategy	C2

Impact area	Impact description	Phase	Nature	Stakeholders affected	Prelim risk	Project-specific strategies	Residual risk
	There is potential for the cumulative impacts of construction works and traffic to affect travel or amenity in the Waters Road area in Calvert/Lanefield and Undullah/Kylmoylar Road in the Kagaru area, as the result of cumulative impacts with H2C and K2ARB respectively.	C	-	Residents, ICC, QPS	C3	▪ Community information regarding construction schedule and roadworks about H2C/K2ARB as relevant to residents in affected areas	C2
	Level crossings will result in periodic traffic delays of an estimated two minutes at each crossing, which may inconvenience and frustrate motorists. Trains of 3,600 m may operate in the Inland Rail corridor from 2040, which could result in longer traffic delays.	O	-	Residents, businesses service providers, QPS, QFES, QAS,	A3	▪ Community information regarding average wait times and road safety in relation to rail operations ▪ Targeted and tailored traffic safety information campaigns	A2
Community cohesion	Community cohesion may be reduced through displacement of residents, physical severance of or between properties, disruption to the road network and potentially community conflict.	C/O	-	Residents and community organisations, SRRC, ICC	B3	▪ Social investment in community projects which strengthen cohesion and funding for community development projects	B2
Sense of place	The Project will introduce a new element to the landscape (including the corridor and elevated structures) which some residents would see as detracting from rural character. Removal of places which show local heritage (e.g. farm buildings) may have localised effects on character.	C/O	-	Residents whose views would be affected	B3	▪ Management measures to reduce noise and visual amenity impacts, and manage impacts on heritage, as outlined in EIS Chapter 23: Draft Outline Environmental Management Plan ▪ Funding for community projects which support local character and cohesion	B2

Impact area	Impact description	Phase	Nature	Stakeholders affected	Prelim risk	Project-specific strategies	Residual risk
Property values and plans	Concerns about property values will cause stress and anxiety for some residents near the disturbance footprint. As multiple factors are involved, the Project's potential impacts on property values cannot be conclusively assessed.	C/O	-	Nearby landholders	A3	▪ Management measures to reduce noise, vibration, dust, traffic, and visual amenity impacts, as outlined in EIS Chapter 23: Draft Outline Environmental Management Plan ▪ Communication of ARTC commitments and EIS approval conditions	B3
Population change	Acquisition of properties is likely to displace an estimated 60 households, equivalent to a loss of approximately 168 people collectively from affected communities. Some may relocate locally. Changes to the Project region's population would be negligible.	C/O	-	Residents of properties to be acquired	A2	▪ No mitigation of population loss possible. ▪ Support provided for people who will need to relocate.	A2
Workforce							
Project employment	Project construction will provide employment for up to 620 personnel during 2021-2026, including people within the Project region, with substantial benefits to workers. Indirect employment is also likely as the result of Project expenditure with businesses in the supply chain.	C	+	Local and regional construction industry personnel and businesses	A3	▪ Locally targeted training and recruitment strategies and targets ▪ Inland Rail Skills Academy	A4
Indirect employment	The Project is likely to stimulate the development of the Ebenezer Regional Industrial Area, increasing employment opportunities in the Ipswich LGA.	O	+	Local residents including those experiencing unemployment, businesses	B3	▪ Inland Rail Skills Academy	B3

Impact area	Impact description	Phase	Nature	Stakeholders affected	Prelim risk	Project-specific strategies	Residual risk
Workforce behaviour	Workforce behaviour may contribute to concerns about privacy or safety, or to amenity impacts (e.g. noise).	C	-	Residents in/near the disturbance footprint	C3	▪ ARTC Code of Conduct	C2
Employment equity	Training and employment opportunities will be provided for people who are disadvantaged in the labour market, including young people and Indigenous people, increasing the regional labour force capacity and leaving a positive legacy for the Project region.	C/O	+	Local residents including those experiencing unemployment	A2	▪ Inland Rail Skills Academy	A3
Labour availability	The Project may contribute to shortages in specific trades, particularly in the cumulative context, affecting residents' and businesses' access to tradespeople.	C/O	-	Local residents and businesses	B3	▪ Inland Rail Skills Academy ▪ Promotion of Project supply opportunities to local businesses ▪ Corrective action to recruitment or training strategies if labour draw is identified as impacting local businesses	B2
Agricultural employment	Acquisition or severance of farms and/or impacts on connectivity to markets may affect farm productivity and the availability of farm employment.	C/O	-	Local workers in the agriculture sector and their families	C3	▪ Property-specific agreements to reduce or avoid impacts ▪ Compensation for loss of legal interest in land, and disturbance costs where relevant ▪ Ensure property access is maintained ▪ Continued engagement with directly affected landholders to ensure agreed mitigation measures remain effective	C2

Impact area	Impact description	Phase	Nature	Stakeholders affected	Prelim risk	Project-specific strategies	Residual risk
						▪ Inland Rail Skills Academy training programs applicable to agricultural industry workers	
Tourism employment	Impacts on the amenity of or connectivity to tourism attractions may reduce their visitation levels, and related employment rates.	C/O	-	Business owners and local workers in the tourism sector, ICC, SRRC, Scenic Rim Tourism Association, Ipswich Tourist Operators Network	C3	▪ Engagement with tourism associations and tourism operators within 5 km of EIS investigation corridor to discuss project and management measures ▪ Identify any additional, feasible strategies such as tourism marketing campaigns ▪ Consult with event managers to identify measures to minimise any impacts on major event visitation	C2
Cumulative employment opportunities	Combined with development of the Ripley Valley and Flagstone PDAs, and expansion of the RAAF Base Amberley, there is potential for the Project to contribute to significant cumulative employment opportunities.	C/O	+	Local residents including those experiencing unemployment, businesses	C3	▪ Nil required	C3
	There is potential to contribute to cumulative labour and skills shortages in the Project region.	C	-	Various businesses and service providers	C3	▪ Monitoring and any adaptive management measures required Training strategies as previously referenced.	C2

Impact area	Impact description	Phase	Nature	Stakeholders affected	Prelim risk	Project-specific strategies	Residual risk
Housing and accommodation							
Affordable housing	Tenants of DTMR-owned dwellings in the EIS investigation corridor and SFRC will need to find alternative affordable accommodation which would be stressful and disruptive for some tenants.	C	-	DTMR tenants, DTMR, DHPW	A3	▪ Sharing of information (as approved by tenants) to enable DTMR/DHPW to support affected households	A2
	There is potential for cumulative labour force demands to require Project personnel from beyond the Project region to stay locally whilst on shift, with potential for demands on housing and/or short term accommodation which would affect low income households' access to housing.	C	-	Local residents, especially low income households DHPW ICC, SRRC	C3	▪ AMP ▪ Monitoring of baseline housing conditions and any project-related changes	C2
Short term accommodation	Noise impacts may affect the amenity of accommodation provided at IRCEC and Flinders Peak Winery whilst construction works are active in their vicinities.	C	-	IRCEC and Flinders Peak Winery	C3	▪ Property-specific mitigation measures developed with affected landholders	C2
	Use of Willowbank Motel or caravan parks in the Project region has potential to displace Ipswich Motorsport Precinct visitors and low income households respectively	C	-	ICC, Ipswich Motorsport Precinct, low income households	C3	▪ Avoid workforce use caravan parks in the Project region ▪ AMP includes measures to minimise impacts on visitors' use of the Willowbank Motel	C2
	There is potential for small number of Project personnel to require short term accommodation, which could contribute to cumulative demands which would displace tourists and event visitors.	C	-	Ipswich and Scenic Rim tourism operators and associations	C4	▪ AMP ▪ Establish and monitor baseline of tourism accommodation availability including seasonal and event related variations	C2

Impact area	Impact description	Phase	Nature	Stakeholders affected	Prelim risk	Project-specific strategies	Residual risk
Health and wellbeing							
Social infrastructure	Road closures increased heavy traffic, roadworks or re-alignments may result in travel time increases to schools and halls in Rosewood and Peak Crossing resulting in inconvenience to families. There is also potential for Project traffic to use roads which are used for school bus routes.	C/O	-	Residents, school bus services and school students (walking/cycling) and school employees	A3	▪ Consultation with Department of Education, local schools and school bus operators as part of TMP to identify and mitigate any areas of concern regarding school bus routes	A2
	Construction personnel may require occasional access to hospital services, which is likely to be within the capacity of existing health services.	C	-	Queensland Health and local doctors, local residents	A2	▪ Paramedic/nursing staff employed by Project to supplement local health service providers	A1
	The Project would increase demand on ambulance and police services for traffic policing, oversize load escorts and general policing, which may require additional resourcing to avoid impacts on residents' service access.	C	-	QPS, QAS, QFES	A3	▪ Advice on workforce ramp-up, protocol development, response strategies to QPS ▪ Regular engagement with QPS, QAS and QFES to support management of increased/changed demands	A2
	Community support services may experience increased demand for support for people to cope with Project-related changes.	C	-	Local community members, health and community support services, Queensland Health, QPS	B3	▪ Funding and/or cooperative responses with DCDSS and PHNS to augment community support services, if monitoring indicates Project-related impacts on service capacity	B2

Impact area	Impact description	Phase	Nature	Stakeholders affected	Prelim risk	Project-specific strategies	Residual risk
	The Project may contribute to a cumulative demand for increased health, emergency and community support services in the Project region, resulting in reduced access for residents.	C	-	Residents, community organisations, Councils and Government agencies	C3	▪ TMP ▪ Communicate with Queensland Health regarding construction program and workforce ramp up ▪ Participate in monitoring of demands on health and community services	C2
Safety	Increased traffic on local roads and highways and changes to road conditions would increase the risk of traffic accidents.	C	-	Residents, businesses, PS, QFES, QAS	B4	▪ Targeted and tailored traffic safety information campaigns	C3
	Construction traffic including heavy haulage vehicles may pass Rosewood State School on Lanefield Road, increasing road safety risks for school students walking or cycling to school.	C	-	Rosewood State School and Rosewood State High School, Rosewood community	C3	▪ Consultation with Rosewood schools and Department of Education to review Draft Outline Environmental Management Plan measures ▪ TMP	D2
	Emergency services may be delayed by level crossings, potentially increasing response times by approximately two minutes for trains of 1,800 m with longer delays for 3,600 m trains, which may affect their response times.	O	-	QPS, QAS, QFES, residents	B4	▪ Protocol development, provision of information about freight rail schedules and access to alternate crossing points	C3
	Level crossings present a risk of road/rail accidents, resulting in social impacts including injury or fatality, impacts on families, communities and rail staff, and additional demand on health and emergency services.	O	-	Motorists, cyclists and pedestrians, QPS, QFES, QAS, SRRC, ICC, DTMR	C5	▪ Tailored delivery of ARTC Rail Safety program to local schools, motorists and communities	C4

Impact area	Impact description	Phase	Nature	Stakeholders affected	Prelim risk	Project-specific strategies	Residual risk
Health	The need for land acquisition and concerns about potential Project impacts has caused stress and anxiety for residents in local communities. Stress and anxiety are likely to persist for some residents during the detailed design and construction phases and may affect residents' mental health.	C/O	-	Residents and business owners in potentially impacted towns and rural residential areas, rural and agricultural landholders	A3	▪ Communication of EIS findings (refer EIS Appendix C: Consultation Report) ▪ Delivery of ARTC's mental health partnership program in the Project region ▪ Monitor mental health service uptake with PHN and adjust resources as required	B3
	Exposure to construction noise or vibration may affect the wellbeing and/or lifestyle of households near the disturbance footprint, particularly if noise inhibits daily activities or causes sleep disturbance. The impacts of track construction would be transitory, but laydown areas or bridge construction sites have potential for longer lasting impacts.	C	-	Nearby residents	C4	▪ Implementation of Draft Outline Environmental Management Plan, CEMP and Noise and Vibration Sub-plan measures ▪ Communicate with potentially impacted households where construction noise could cause sleep disturbance to monitor the effectiveness of noise mitigation strategies ▪ Complaints Handling Management Procedure	C3
	Noise resulting from freight rail operation may affect quality of life, lifestyles (e.g. outdoor activities) and/or sleep at private properties generally located within 300 m of the alignment, as identified in Appendix Q: Operational Noise and vibration technical report	O	-	Nearby residents	B4	▪ Consultation with landholders to identify and implement noise mitigation measures ▪ Establish communication mechanisms including implementation of Complaints Handling Management Procedure	B3

Impact area	Impact description	Phase	Nature	Stakeholders affected	Prelim risk	Project-specific strategies	Residual risk
	Dust from construction activities, or during rail line operation, could settle in rain water tanks on properties in close proximity to the rail corridor.	C/O	-	Nearby residents	C3	▪ Advance notice of construction activities that may cause dust ▪ Investigation of any complaints and if necessary, dust monitoring to enable corrective actions if required	C2
	Employment opportunities are likely to result in positive mental health benefits for the individuals employed, particularly if unemployed or irregularly employed.	C/O	+	Local and regional residents, especially jobseekers	A2	▪ Local training partnerships which support employment pathways	A3
	The Project would provide increased opportunity for rail-based suicide for vulnerable people.	O	-	Community members, particularly those with mental health issues, emergency responders	C5	▪ Prior to operations, engage with the PHNs and Queensland Health to gauge the need for any ongoing support for mental health services during the operational period. ▪ Arrangements with QPS, QAS and QFES to enable cooperative responses to any incidents e.g. rail accidents, road-rail or suicides	D5
Access to natural resources and active recreation	The Project may impact on horse riding trails in the Undullah area. If the Boonah to Ipswich Trail is implemented in future, planning would need to consider the location of the Project alignment in relation to Wild Pig Creek Road.	C/O	-	Trail and park users	A3	▪ Communication with SRRC and horse trail user groups to enable them to plan alternative routes where Project crosses horse trails in Undullah	A2

Impact area	Impact description	Phase	Nature	Stakeholders affected	Prelim risk	Project-specific strategies	Residual risk
	Roadworks or traffic on Middle Road may interrupt access to the Purga Nature Reserve during construction. During operations, the amenity of Purga Nature Reserve may be periodically disturbed by railway noise.	C/O	-	Nature Reserve users, ICC users	B3	▪ Project communications and awareness raising of roadworks and construction schedule	B2
	Groundwater bores may be destroyed or access prevented as the result of direct Project impacts. There is also potential for groundwater drawdown to affect bores.	C	-	Landholders in and near the disturbance footprint, businesses or community members that access bores	A3	▪ Property-specific agreements regarding mitigation provisions for impacts on groundwater bores	A2
Transport and accessibility	Construction works, road re-alignments and closures, and delays at level crossings are likely to disrupt traffic on roads directly impacted by the Project. This may cause travel time delays for access to education, health, emergency, civic and recreational facilities and//or community halls	C	-	Local and regional residents, services	A3	▪ Provision of community development funding to support community cohesion and funding for community development projects	A2
Business and industry							
Impacts on agricultural properties	The Project will result in direct impacts on agricultural land uses, including severance of landholdings, relocation of on-farm infrastructure, and temporary disruptions to property access. Roadworks may also increase travel times to markets.	C	-	Directly affected landholders and farm/property employees	A3	▪ Property-specific measures to reduce impacts on agricultural land and farm infrastructure	A2

Impact area	Impact description	Phase	Nature	Stakeholders affected	Prelim risk	Project-specific strategies	Residual risk
	The Project would constrain stock and equipment movements across and between properties separated by the rail line. There is also potential for impacts on access to markets/travel times for poultry farms, other farmers, graziers and feedlots.	C/O	-	Landholders	C3	▪ Provide advance notice of timing and location of unformed road closures and construction works affecting informal stock crossings	C2
Tourism	Visitation rates for tourism businesses near the EIS investigation corridor may be affected by travel time delays or amenity impacts (noise and visual), affecting tourism businesses' trading levels.	C/O	-	IRCEC, Flinders Peak Winery, employees and associated businesses	C4	▪ Support for local tourism marketing and promotion	C3
	There is potential for construction noise or disruption to traffic on Champions Way and Cunningham Highway to affect Ipswich Motorsport Precinct event patronage	C	-	ICC, Ipswich Motorsport Precinct lessees and patrons	C3	▪ Engagement with ICC and other Ipswich Motorsport Precinct stakeholders to share information and agree any cooperative action required e.g. as part of the TMP or CNVMP	C2
Local supply opportunities	The Project will provide significant opportunities for local and regional businesses, including Indigenous businesses, to participate in its supply chain. This will develop business capacity and leaving a positive legacy for the Project region.	C	+	Local and regional businesses	A4	▪ Nil required – comprehensive local supply plan, policy and strategy committed	A4

Impact area	Impact description	Phase	Nature	Stakeholders affected	Prelim risk	Project-specific strategies	Residual risk
Facilitation of industrial development	Potential to facilitate access for businesses in the Ebenezer Regional Industrial Area to rail transport, and stimulate establishment of businesses or industry precincts which will generate employment	O	+	Local and regional businesses, job seekers	B3	▪ Nil required	B3

10 Conclusions

This section discusses distributional equity (the effect of differing impacts across groups, areas and time), and summarises residual social impacts and Project benefits.

10.1 Distributional equity

As for all major projects located near human settlements, negative impacts are more likely to be experienced by those living closest, whilst Project benefits usually accrue at a broader regional level. This has been noted by residents in the SIA study area who anticipate negative impacts but are uncertain that significant benefits in the form of employment or business opportunities will result during construction, and of the potential for local communities to benefit during the Project's operation.

Distributional equity considerations for the Project include:

- An estimated 60 households within the EIS investigation corridor would need to relocate to enable the Project's construction
- The Project travels through areas with high potential for social disadvantage, where particular care will be needed to support residents through the changes resulting from the Project
- The operations and management of farms and agribusinesses could be affected whilst landholders adjust to land acquisition impacts
- Residents living near the EIS investigation corridor would experience noise, travel delays and changes to local character during construction
- The Project will introduce a significant freight route through rural areas with potential for rail noise to affect amenity in proximity to the rail corridor.

Current residents will experience the most significant impacts during the construction phase, however there is potential for rail operational noise to have long term effects on the amenity of areas closest to the rail corridor.

Communities in the SIA study area have experienced a long period of severe drought, with effects on mental health and financial wellbeing, community resilience and business vitality. It is therefore particularly important that the Project's impacts are minimised and benefits for local communities. are maximised.

Potential Project benefits and opportunities include:

- Employment for up to 620 personnel in Project construction, including people within the Project region and nearby LGAs, with indirect employment also likely to be stimulated
- Training and career pathway development for young people, Indigenous people and unemployed people, who are disadvantaged in the labour market
- Opportunities for local, regional and Indigenous businesses to participate in the Project's construction supply chain
- Development of labour force skills and business capacity which will enable future employment and business opportunities for Project region residents
- Potential to catalyse improved employment and business opportunities in the SIA study area through stimulating the establishment of businesses or industry precincts such as the Ebenezer Regional Industrial Area.

The Project is part of the Inland Rail Program, which will make a strong contribution to regional, State and national development. Inland Rail will slow the increase in road freight on regional roads, which will lead to broader benefits for people living near road freight corridors or using roads and highways which are currently dominated by trucks, with potential for traffic safety benefits.

10.2 Residual risks

Residual risks to social values were identified in **Table 9-3**. In applying the consequence criteria shown in **Table 9-2**, assessment of residual risks acknowledged that some construction impacts may occur throughout the duration of the construction period of approximately four years, and that it may take time for residents to adjust to changes resulting from the Project. With a design life of 100 years, the Project's operational impacts and benefits may be experienced for the long term.

Residual risks of moderate or major consequence are shown in **h**, along with measures to address the residual risks.

As for other rail lines in Australia, the increased risk of road/rail accidents and potential to enable rail suicide are long term risks with possible catastrophic consequences (i.e. fatalities).

Table 10-1: Residual impacts of moderate or major consequence

Project phase	Residual impact	Measures to address residual impacts
Construction	The Project will introduce additional linear infrastructure to the landscape, contributing to cumulative impacts on Indigenous people's feeling of connection with Country.	▪ ARTC will maintain engagement with the Yuggera Ugarapul People as the Traditional Owners of Country in which the Project is located, to ensure their awareness of Project works and operations, and the Project's awareness of cultural values and community aspirations ▪ Engagement with the Yuggera Ugarapul People may identify projects or initiatives to strengthen their connection to country and/or community recognition of Yuggera Ugarapul People's connection to Country.
	Concerns about property values will cause stress and anxiety for some residents near the EIS investigation corridor, likely during construction, with potential for concerns to persist during Project operations.	▪ The Project's CEMP and associated sub-plans will detail management measures to avoid or reduce environmental impacts, which if not mitigated, could affect the amenity or use of properties, and consequently perceptions of property values ▪ ARTC will provide access to the EIS, information about the Project's environmental management measures and EIS approval conditions, and the Project's compliance with approval conditions, via the Inland Rail webpage to enable informed decisions about property purchase

Project phase	Residual impact	Measures to address residual impacts
	The need for land acquisition and concerns about potential Project impacts has caused stress and anxiety for residents in local communities. Stress and anxiety are likely to persist for some residents during the detailed design and construction phases and may affect residents' mental health.	▪ ARTC will ensure the availability of regular, timely and accessible information to enable local residents to understand and where necessary adjust to changes resulting from the Project ▪ ARTC will monitor the delivery and uptake of mental health services and any other services provided as part of the mental health partnership program in cooperation with the PHNs, and increase the resources available to support mental health or community support services if this is required to maintain service
	Exposure to construction noise or vibration from laydown areas or bridge construction sites may affect the wellbeing and/or lifestyles of households near the disturbance footprint	▪ The Project will communicate with landholders within 250 m of laydown and bridge construction sites and monitor complaints from residents in these areas ▪ If complaints indicate that impacts are affecting households' wellbeing, corrective actions will be implemented as part of the CEMP
	Increased traffic on local roads and highways and changes to road conditions could increase the risk of traffic accidents	▪ The contractor will monitor the occurrence of traffic accidents related to construction activities or construction traffic in cooperation with QPS ▪ If monitoring data indicate that traffic safety is declining as a result of the Project, the TMP will be revised to include corrective actions
	Visitation rates for tourism businesses near the EIS investigation corridor may be affected by travel time delays or amenity impacts (noise and visual), affecting tourism businesses' trading levels.	▪ The Project will establish engagement mechanisms with tourism business and networks to enable any specific impacts on tourism visitation to be identified, to enable any corrective actions required as part of communication strategies (e.g. regarding road travel and the construction schedule) ▪ Engagement planned as part of the detailed design phase may identify additional initiatives to support tourism in the Project region
Operations	During operations, emergency services may be delayed by level crossings, potentially increasing response times by approximately two minutes for trains of 1,800 m which may affect their response times.	▪ ARTC will engage with QFS, QPS and QAS to facilitate access to information about train schedules and access to alternate crossing points to reduce the potential for and/or duration of delays to emergency vehicles
	Level crossings present a risk of road/rail accidents	▪ ARTC will monitor the occurrence of Project-related road/rail accidents and incidents, in cooperation with QPS ▪ If monitoring data identity specific safety issues with respect to level crossings, ARTC will engage with QPS to determine the need for any further preventative/corrective measures

Project phase	Residual impact	Measures to address residual impacts
	Noise resulting from freight rail operation may affect quality of life, lifestyles and/or sleep at private properties generally located within 300 m of the alignment, as identified in EIS Appendix Q: Operational Noise and vibration technical report.	▪ If complaints about rail noise indicate that the Project is causing unacceptable noise levels, ARTC will investigate and implement measures to address the cause of concern
	The Project would provide increased opportunity for rail-based suicide for vulnerable people.	▪ Prior to operations, engage with the PHNs and Queensland Health to gauge the need for any ongoing support for mental health services during the operational period ▪ Arrangements with QPS, QAS and QFES will enable cooperative responses to any incidents and monitoring of any specific safety risks to enable corrective action

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