

APPENDIX

INLAND  
RAIL 

Q

Social Impact  
Assessment  
Technical Report

HELIDON TO CALVERT ENVIRONMENTAL IMPACT STATEMENT

# INLAND RAIL HELIDON TO CALVERT PROJECT

## APPENDIX Q SOCIAL IMPACT ASSESSMENT



## **Inland Rail: Helidon to Calvert**

### **Appendix Q**

#### **Social Impact Assessment**

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**Contents**

- 1 Introduction ..... 18**
  - 1.1 Purpose of the SIA ..... 18
  - 1.2 Project location ..... 18
- 2 Legislation, policy and guidelines ..... 20**
  - 2.1 State Development and Public Works Organisation Act 1971 ..... 20
  - 2.2 EIS Terms of Reference ..... 20
  - 2.3 SIA Guideline ..... 23
  - 2.4 State, regional and local plans and policies ..... 25
  - 2.5 Summary of alignment with planning priorities ..... 28
- 3 Methodology ..... 30**
  - 3.1 Stakeholder engagement ..... 30
  - 3.2 Scoping ..... 31
  - 3.3 Social baseline ..... 32
  - 3.4 Impact assessment ..... 32
  - 3.5 Integration with EIS findings ..... 35
  - 3.6 Cumulative impact assessment ..... 36
  - 3.7 Significance assessment ..... 36
  - 3.8 SIMP ..... 37
  - 3.9 Limitations ..... 37
- 4 Project description and SIA Scope ..... 39**
  - 4.1 Project description ..... 39
  - 4.2 SIA study area ..... 45
  - 4.3 Stakeholders ..... 51
  - 4.4 Scope of potential impacts ..... 57
- 5 Social environment ..... 59**
  - 5.1 Settlement pattern ..... 59
  - 5.2 Community profile ..... 64
  - 5.3 Community and cultural values ..... 84
  - 5.4 Employment, business and industry ..... 89
  - 5.5 Housing and accommodation ..... 101
  - 5.6 Social infrastructure ..... 112
  - 5.7 Health and wellbeing ..... 120
- 6 Stakeholder engagement ..... 129**
  - 6.1 ARTC engagement ..... 129
  - 6.2 SIA engagement ..... 130
  - 6.3 Engagement outcomes ..... 132
- 7 Potential impacts ..... 149**
  - 7.1 Communities ..... 149
  - 7.2 Workforce ..... 177
  - 7.3 Housing and accommodation ..... 183
  - 7.4 Health and wellbeing ..... 194
  - 7.5 Business and industry ..... 223
  - 7.6 Cumulative impacts ..... 236
- 8 Social Impact Management Plan ..... 247**
  - 8.1 Introduction ..... 247
  - 8.2 Community and stakeholder engagement ..... 261



8.3	Workforce management .....	290
8.4	Housing and accommodation.....	299
8.5	Health and community wellbeing .....	307
8.6	Local business and industry participation .....	319
8.7	Monitoring, reporting and review .....	329
<b>9</b>	<b>Impact assessment.....</b>	<b>339</b>
<b>10</b>	<b>Conclusions.....</b>	<b>366</b>
10.1	Distributional equity .....	366
10.2	Residual risks .....	367
<b>11</b>	<b>References.....</b>	<b>370</b>

## Figures

Figure 4-1	SIA study area.....	46
Figure 4-2	SIA study area and regional economic catchment .....	48
Figure 4-3	Survey participants' views on social impacts and benefits .....	56
Figure 5-1	SA1 areas within the EIS investigation corridor.....	65
Figure 5-2	SIA study area community values.....	88
Figure 5-3	Change in largest industry sector employment, 2006 – 2016 – Local Government Area ...	90
Figure 5-4	Unemployment rate in Ipswich and Lockyer Valley LGAs (percentage) March 2016 – March 2020 .....	94
Figure 5-5	Construction employment numbers, Selected SA4 regions, 2014-2019.....	98
Figure 5-6	Community wellbeing survey results.....	121
Figure 6-1	Inland Rail G2K Project SIA community survey - total responses by LGA.....	133
Figure 7-1a-b	Settlements, land use and social infrastructure .....	195
Figure 8-1	Inland Rail social performance approach to maximising local and Indigenous participation .....	250

## Tables

Table 2-1	SIA Terms of Reference .....	21
Table 2-2	Compliance with SIA Guideline 2018.....	24
Table 2-3	Project alignment with planning priorities .....	28
Table 3-1	SIA assessment methods .....	32
Table 3-2	Data quality summary .....	35
Table 3-3	Links to EIS Findings .....	35
Table 4-1	Project elements of relevance to the social environment .....	43
Table 4-2	Statistical geography.....	50
Table 4-3	Stakeholder profile .....	51
Table 4-4	Potential social impacts and benefits.....	57
Table 5-1	SA1 Characteristics .....	66
Table 5-2	Population 2011 – 2016 – SSC, LGA and Queensland (number and percentage change)	67
Table 5-3	Indigenous People, 2016 – SSC, LGA and Queensland (number and percentage).....	68
Table 5-4	Indigenous Population – Selected social characteristics, 2016.....	70

Table 5-5	Estimated population growth 2011 to 2026 – SA2 and LGA (number).....	70
Table 5-6	Population growth 2011 to 2026 – SA2 and LGA (percentage change) .....	71
Table 5-7	Family type, 2016 – SSC, LGA and Queensland (percentage).....	72
Table 5-8	Household type, 2016 – SSC, LGA and Queensland (percentage) .....	72
Table 5-9	Change in median age and gender, 2011 to 2016 (years and percentage change).....	73
Table 5-10	Selected Age Groups, 2016 – SSC, LGA and Queensland (number and per cent).....	74
Table 5-11	Core Disability (need for assistance), 2016 – SSC, LGA and Queensland (number and percentage).....	75
Table 5-12	Highest level of schooling completed 2016 – LGA and Queensland (number and percentage) .....	76
Table 5-13	Non-school qualifications, 2016 – LGA and Queensland (number and percentage) .....	76
Table 5-14	Household Income and Household Size, 2016 – SSC, SA2, LGA and Queensland .....	77
Table 5-15	Dwelling internet connection, 2016 – SA2, LGA and Queensland (percentage).....	78
Table 5-16	Relative socio-economic advantage and disadvantage, 2016 – SA2 and LGA .....	79
Table 5-17	Motor Vehicle Ownership, 2016 – SSC, SA2, LGA and Queensland (number).....	80
Table 5-18	Methods of travel to work for employed persons, 2016 – SSC and LGA (percentage).....	83
Table 5-19	Cultural Diversity Indicators, 2016 – SSC, LGA and Queensland (percentage) .....	85
Table 5-20	Industry of employment, number by industry, 2016 – SA4, LGA and SIA study area (number of people) .....	89
Table 5-21	Occupational groups, 2016 – LGA (percentage) .....	91
Table 5-22	Unemployment, 2011 and 2016 – State suburb (number and percentage) .....	92
Table 5-23	Unemployment, 2011 and 2016 – LGA, SA4 and Queensland (percentage of labour force) .....	92
Table 5-24	Unemployment by population cohort, 2016 – LGA, SA4 and Queensland (number and percentage).....	93
Table 5-25	Registered businesses by industry, 2016-17 – by LGA (number and per cent).....	96
Table 5-26	Registered businesses by employment size, 2016-2017 – by LGA (number and percentage) .....	97
Table 5-27	Skill shortages, Queensland, 2018 .....	98
Table 5-28	Dwelling occupancy, 2016 – SSC, SA2, LGA and Queensland (number and percentage) .....	101
Table 5-29	Dwelling structure (private dwellings), 2016 – SSC, SA2, LGA and Queensland (percentage) .....	102
Table 5-30	Tenure, 2016 – SSC, SA2, LGA and Queensland (per cent).....	104
Table 5-31	Housing Stress, 2016 – Statistical Area 2 (percentage of households) .....	105
Table 5-32	Homeless Persons, 2011 and 2016 – SA2 and LGA (number).....	105
Table 5-33	Social Housing, 2016 – SSC, SA2 and LGA (number and percentage).....	106
Table 5-34	Median dwelling price (house and units), June 2019 – Post Code and LGA (price and percentage change).....	107
Table 5-35	Rental vacancies, January 2019- January 2020 – Postcode (number and percentage) ..	108
Table 5-36	Median weekly rent, 2020 – Postcode (price and percentage change).....	108
Table 5-37	Dwelling approvals, 2018-2019 – SA2 and LGA (number).....	109
Table 5-38	Short-term accommodation in potentially impacted communities .....	109
Table 5-39	Childhood education and care services, 2018 – LGA (number).....	113
Table 5-40	Primary and secondary education facilities, 2018 - LGA (number of enrolments) .....	113
Table 5-41	Primary health services.....	115

Table 5-42	Hospital and health service profile .....	115
Table 5-43	Aged care services, 30 June 2016 - LGA .....	116
Table 5-44	Emergency services, June 2018 - LGA .....	116
Table 5-45	Community and civic and support services .....	118
Table 5-46	Recreation and cultural facilities .....	119
Table 5-47	Public Health Area data geography .....	120
Table 5-48	Hospital admissions by type .....	125
Table 6-1	SIA engagement principles .....	130
Table 6-2	SIA Engagement .....	131
Table 6-3	Issues raised by stakeholders addressed in SIA .....	146
Table 7-1	Land use within the permanent operational disturbance footprint and outside designated rail corridors .....	152
Table 7-2	Project land use requiring relocation of households .....	153
Table 7-3	Potential Project impact on settlement patterns .....	184
Table 7-4	Potential impacts on community facilities .....	200
Table 7-5	School bus routes affected by alignment .....	204
Table 7-6	Potential impacts on recreation facilities .....	210
Table 7-7	Construction inputs .....	234
Table 7-8	Cumulative Project set .....	237
Table 7-9	Potential cumulative social impacts .....	244
Table 8-1	Social performance outcomes and links to SIA/findings/SIMP measures .....	251
Table 8-2	Key issues and ARTC responses .....	255
Table 8-3	Mitigation measures linked to planning priorities .....	260
Table 8-4	Engagement objectives, desired outcomes and performance measures .....	262
Table 8-5	Status of partnerships and agreements .....	263
Table 8-6	Engagement responsibilities .....	266
Table 8-7	Community and stakeholder engagement .....	273
Table 8-8	Community and stakeholder engagement monitoring .....	288
Table 8-9	Workforce management .....	295
Table 8-10	Housing and accommodation .....	303
Table 8-11	Health and wellbeing .....	314
Table 8-12	Local business and industry .....	325
Table 8-13	Social monitoring framework .....	332
Table 9-1	Risk assessment ratings .....	339
Table 9-2	Consequence criteria .....	340
Table 9-3	Social impacts and benefits .....	342
Table 10-1	Potential residual impacts of moderate or major consequence .....	367

## Abbreviations

ABS	Australian Bureau of Statistics
ACH Act	Aboriginal Cultural Heritage Act 2003
AEDC	Australian Early Development Census
AEP	Australian Exceedance Probability
AL Act	Acquisition of Land Act 1967 (Queensland)
AMP	Accommodation Management Plan
ARTC	Australian Rail Track Corporation
C2K	Inland Rail Calvert to Kagaru
CCC	Community Consultative Committee
CEMP	Construction Environmental Management Plan
CHMP	Cultural Heritage Management Plans
CNVMP	Construction Noise and Vibration Environmental Management Plan
COAG	Council of Australian Governments
CRG	Community reference group
CYMHS	Child and Youth Mental Health Service
Db(A)	Decibel levels weighted to approximate the way the human ear hears
DCDSS	Department of Communities, Disability Services and Seniors
DCHDE	Department of Communities, Housing and Digital Economy
DESBT	Department of Employment, Small Business and Training
DESSFB	Department of Employment, Skills, Small and Family Business
DFW	Domestic and family violence
DITRDC	Department of Infrastructure Transport Regional Development and Communications
DITRDC	Department of Infrastructure, Transport, Regional Development and Communications
DPHW	Department of Housing and Public Works
Draft Outline EMP	Draft Outline Environmental Management Plan
DRDMW	Department of Regional Development, Manufacturing and Water
DSD	Department of State Development
DSDILGP	Department of State Development, Infrastructure, Local Government and Planning
DSDMIP	Department of State Development, Manufacturing Infrastructure and Planning
DSDSATSIP	Department of Seniors, Disability Services and Aboriginal and Torres Strait Islander Partnerships
DSDTI	Department of State Development, Tourism and Innovation
DTMR	Department of Transport and Main Roads
DVO	Domestic violence order
EIS	Environmental Impact Statement
EP Act	Environmental Protection Act 1994 (Queensland)
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)
ERP	Estimated resident population
FTE	Full time equivalent
G2H	Inland Rail Gowrie to Helidon

ABS	Australian Bureau of Statistics
G2K	Inland Rail Gowrie to Helidon, Helidon to Calvert and Calvert to Kagaru projects
GP	General practitioner
GWIZ	Gatton West Industrial Zone
H2C	Inland Rail Helidon to Calvert (the Project)
Ha	Hectare
HACC	Home and Community Care
ICC	Ipswich City Council
IEO	Index of Education and Occupation
IFC	International Finance Corporation
IFS	Intermodal Freight Terminal
iGO	City of Ipswich Transport Plan
IRSAD	Index of Relative Socio-Economic Advantage and Disadvantage
IS	Infrastructure Sustainability
LGA	Local Government Area
LIPP	Local Industry Participation Plan
LVRC	Lockyer Valley Regional Council
NNTT	National Native Title Tribunal
NT	Native Title
P&C	Parents and Citizens Association
PDA	Priority Development Area
PHA	Population Health Areas
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
QPS	Queensland Police Service
QRIDA	Queensland Rural and Industry Development Authority
RD Plan	Regional development Plan
RDA	Regional Development Australia
RSIS	Regional Skills Investment Scheme
TMP	Traffic Management Plan
TRC	Toowoomba Regional Council
UQ	University of Queensland
USQ	University of Southern Queensland

# Summary

## Project and SIA Study Area

The Helidon to Calvert (H2C) Inland Rail Project (the Project) consists of an approximately 47 km single track dual gauge railway with four crossing loops and includes construction of an approximately 850 m long tunnel through the Little Liverpool Range.

The Project will be constructed between Helidon, in the Lockyer Valley Local Government Area (LGA), and Calvert, in the Ipswich LGA. Potentially impacted communities include Helidon, Grantham, Placid Hills, Gatton, Lawes, Forest Hill, Laidley North, Laidley, Grandchester and Calvert. The Lockyer Valley LGA and the Ipswich LGA comprise the SIA study area in which the Project's social impacts and benefits are most likely to occur.

## Social Baseline

The EIS investigation corridor is located on land within the Yuggera Ugarapul People's Native Title claim area.

The Lockyer Valley LGA covers an area of 2,200 km<sup>2</sup> and is based around the Warrego Highway one hour west of Brisbane and 20 minutes east of Toowoomba. In 2016, the Lockyer Valley LGA had a population of 38,609 people. Agriculture, forestry, farming, transport and small business are key economic strengths, with tourism also growing as a significant economic sector. Regional farm work attracts backpacker, refugee and migrant labourers, giving the region a fluctuating cultural profile.

Gatton is the commercial centre of the region, with other larger towns including Laidley, Grantham and Helidon, and smaller townships and villages including Withcott, Murphys Creek, Plainland and Forest Hill.

Ipswich City is Queensland's oldest provincial city and is the centre for the LGA which covers some 1,085 km<sup>2</sup> and in 2016, was home to 193,733 people. Ipswich LGA is characterised by the Bremer River and its tributaries, the historic town centre and diverse suburban and semi-rural areas.

Key industry sectors include energy generation, food and agribusiness, defence, advanced manufacturing and transport and logistics. (Ipswich City, 2018a). Ipswich LGA also has significant strengths in education, training and health services.

Engagement undertaken for the SIA indicates that community members enjoy the following attributes of their environment and quality of life:

- The rural character and identity of local towns and the rural land uses surrounding them
- The culturally diverse, yet close-knit and cohesive community, with strong community connections and mutual reliance between neighbours
- For Aboriginal people, their relationship to land and the natural elements of place
- Access to facilities which support community interaction and healthy lifestyles within a few minutes' drive, with larger service hubs less than one hours' drive away
- The rural landscape, characterised by hills, plains, vegetation and vistas across rural land.

Key features of the social baseline include:

- The EIS investigation corridor crosses areas where there is existing potential for disadvantage
- Most of the potentially impacted communities had a population of less than 1,000 people in 2016, with the exception of Helidon (1,061), Gatton (7,102) and Laidley (3,803)

- Population growth of 30.2 per cent is expected in the Ipswich LGA between 2021 and 2026, and growth in the Lockyer Valley LGA is expected to remain steady at 9.4 per cent between 2021 and 2026
- Percentages of Indigenous people are higher than the State average in Calvert, Helidon, Laidley North and Grandchester
- Ipswich LGA had a younger population with a median age of 32 years in 2016, while the median age of Lockyer Valley LGA residents was 39 years
- Lockyer Valley LGA had a higher than average percentage of residents aged over 65 years, with the highest percentages in Laidley and Calvert
- Average household incomes were lowest in Lawes and Laidley, and above the Queensland average in Placid Hills and Calvert
- Almost one in five (18.8 per cent) of Lockyer Valley LGA residents did not access the internet from their dwelling in 2016, compared to 13.8 per cent for the Ipswich LGA and 13.6 per cent for Queensland
- While Ipswich residents have good access to passenger rail services, communities in the Lockyer Valley region are heavily reliant on private transport and have limited to no public transport.

### **Community and stakeholder engagement**

Project stakeholders include:

- Landowners in the EIS investigation corridor
- Community members and groups
- Lockyer Valley Regional Council (LVRC)
- Ipswich City Council (ICC)
- Traditional Owners and other Indigenous parties
- Training providers
- Accommodation providers
- Community and Government agencies
- Businesses and business organisations.

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

- A community survey involving more than 400 residents in the Toowoomba, Lockyer Valley, Ipswich and Scenic Rim LGAs
- Meetings with Yuggera Ugarapul People
- Meetings with LVRC and ICC officers to discuss community concerns, potential social impacts and benefits, and mitigation and management measures
- Workshops with community organisations and Government agencies to discuss social infrastructure access and community concerns about the Project
- Meetings with the Office of Coordinator-General
- Engagement with Government agencies on the draft SIA's findings and management measures.



## **Impacts and opportunities**

### ***Communities and stakeholders***

During construction, impacts on communities and residents would include:

- Acquisition of residential properties and the requirement for relocation of Department of Transport and Main Roads (DTMR) tenants, leading to stress and anxiety for residents, and disruption of lifestyles and social networks
- Acquisition of agricultural land resulting in property severance, loss of farmland and potential for effects on farm management
- Noise from rail and track construction, affecting the amenity of homes, and potentially causing sleep disturbance whilst construction works are near homes, which could affect quality of life
- Potential for significant impacts on the amenity of homes and businesses within the Gatton, Forest Hill and Grandchester town centres due to noise, traffic and changes to the scenic character, with potential for noise and increased traffic and/or dust to negatively affect areas within Laidley North and Helidon
- Disruption to the connectivity of the road network, and traffic delays
- A potential reduction in community cohesion due to displacement of residents, intensification of the use of the West Moreton System rail corridor, impacts on the amenity or accessibility of community facilities, or conflict about the Project.

During operations, potential impacts include:

- An increase in the number and size of trains, increasing the frequency of rail noise and interruptions to north-south movements through the towns of Gatton, Forest Hill and Grandchester. Nearby residents may experience this noise from the Project's operation as intrusive on their amenity, regardless of compliance with noise triggers.
- Changes to views from homes, which may impact on visual amenity near the alignment
- Level crossings on public roads will result in disruptions to traffic, with a delay of approximately two minutes each time. Trains of 3.6 km may operate from 2040, which could result in longer traffic delays.
- A combination of impacts on visual amenity, connectivity and the noise environment is likely to detract from the character of Gatton, Forest Hill and Grandchester, with some impacts on the urban fringes of Helidon, Laidley, Grantham and Calvert.

### ***Employment and training***

The Project's construction represents an important source of training and career development for residents in the SIA study area. Employment for up to 410 personnel during 2021-2026 will benefit construction industry personnel in the SIA study area and adjacent LGAs. This will include employment opportunities for people who are disadvantaged in the labour market, including young people and Indigenous people.

Possible negative impacts on employment include exacerbation of shortages in specific trades, potential for cumulative impacts to affect the availability of labour, and potential for impacts on farms and/or the amenity of tourism attractions to reduce related employment opportunities.



There is a significant regional pool of existing skilled labour and workers who are already equipped or could be trained for construction work on the Project. The Project will also have access to construction personnel within a daily driving distance in adjacent LGAs. On this basis, difficulties accessing adequate labour for construction from within a safe daily driving distance are not expected.

A workforce of approximately 15 – 20 personnel is expected for the Project's operation, with potential for SIA study area residents to obtain long-term employment. As part of the Inland Rail Program (Inland Rail), the Project would facilitate complementary private investments which may contribute to long-term employment opportunities in the SIA study area.

### ***Housing and accommodation***

Potential impacts during construction include:

- Use of land near Helidon, Gatton, Laidley, and Calvert which has potential for future residential development
- The requirement for DTMR tenants and private landholders to find alternative housing
- Significant concern about the potential for Project impacts to affect property values, leading to stress and anxiety
- Noise, visual and access impacts on Gatton Caravan Park, with the likelihood of partial acquisition of land within the caravan park affecting approximately 15 per cent of its current capacity and up to 28 per cent of its planned future capacity
- Impacts on the amenity of accommodation provided at hotels in Gatton and Forest Hill.

The number of non-local personnel requiring short-term accommodation is expected to be small and unlikely to constrain resident's access to housing or tourists' access to accommodation, however this will be monitored and managed in accordance with an Accommodation Management Plan (AMP). The coincidence of several major Projects' construction phases has potential to strain the capacity of the SIA study area's construction labour force, with a cumulative increase in numbers of non-local personnel, and consequent impacts on rental housing availability or the availability of short-term accommodation. Impacts on housing and accommodation availability during the Project's operation are not expected.

### ***Health and wellbeing***

Potential impacts on wellbeing during construction include:

- Effects on mental health through stress and anxiety relating to property acquisition, fears about noise and vibration impacts, and/or distress about changes to the environment
- Effects on community wellbeing as the result of impacts on local character affecting sense of place, effects on community cohesion, or decreased amenity of community and recreational facilities
- Frustration as a result of road works, disruption to travel routes and wait times.

During construction, impacts on social infrastructure which supports community wellbeing include:

- Grandchester State School would experience disrupted pedestrian access, noise and separation from the School Road Reserve
- Construction noise could affect the amenity of schools and early learning centres in Gatton, Grandchester, Forest Hill and Laidley whilst construction works are occurring near schools and centres
- In Gatton, Forest Hill and Grandchester, access between residents and community facilities on opposite sides of the Project will be interrupted

- There is potential for exceedance of noise criteria to affect churches in Gatton, Helidon, Forest Hill, Laidley and Grandchester
- Roadworks and/or construction traffic may temporarily disrupt school access routes
- Direct impacts on the School Road Reserve (Grandchester) and Apex Park (Gatton)
- Potential noise impacts on facilities supporting seniors and people with disability
- Impacts on the amenity and accessibility of the Grandchester Community Hall, Gatton Bowls Club, Littleton Park in Gatton, Gatton Showground, Forest Hill Community Hall and Furley Park
- Potential delays to emergency services at road works, and when encountering oversized vehicles on roads
- An increase in demand for community support and mental health services as the result of stress and anxiety related to the Project
- Construction personnel's need for occasional access to local health services
- Increased demands on police services in relation to traffic policing, oversized vehicles escorts, liaison with the Project and community policing.

During operation, potential impacts on social infrastructure may include:

- An increased risk of road/rail accidents, potentially creating additional demand on health and emergency services
- Potential for increased frequency of audible rail noise and periodic interruptions to pedestrian connectivity for schools, kindergartens and community facilities in Gatton, Forest Hill and Laidley
- Delays to emergency service vehicles at level crossings when encountering a passing train
- The amenity of Furley Park, Grandchester Community Hall, Forest Hill Community Hall, Wilks Park and the Move and Groove Dance School may be impacted by rail noise.

Potential impacts on wellbeing during operation include:

- Concerns about the Project's potential to exacerbate flooding contributing to anxiety
- Rail noise within regulatory limits may cause stress and related health issues for people who are sensitive to noise or opposed to the Project's location
- Increased opportunity for rail-based suicide and collisions between trains and motorists, cyclists and pedestrians, with consequent trauma and loss for families, service providers and social networks.

The Project would also provide employment opportunities for SIA study area residents, which can support benefits to mental health.

At the national level, the Inland Rail Business Case anticipates that Inland Rail as a whole will remove 200,000 truck movements from roads each year, resulting in improved road safety, a reduction in serious accidents, reduced truck volumes in regional towns, and a reduction in carbon emissions.

### ***Business and industry***

The Project will have direct impacts on grazing and cropping properties including loss of productive land and impacts on property infrastructure and connectivity.

Potential impacts on other businesses during construction include:

- Decreased amenity of businesses in Gatton and Forest Hill as a result of construction noise, dust, and access disruptions

- Acquisition of land on some businesses' boundaries which may affect access or car parking arrangements
- Potential for cumulative demands for labour to draw tradespeople and professional staff from within local communities, affecting the availability of tradespeople and other staff
- Impacts on tourism businesses including reduced amenity of hotels, cafes and specialty shops in Forest Hill and Gatton, and potential for road works and construction sites to affect tourists' experience.

A number of businesses near the corridor would also be exposed to operational rail noise impacts.

The Project will provide opportunities for local and regional businesses to participate in its supply chain during construction and will have a specific focus on the involvement of businesses in the Lockyer Valley and Ipswich LGAs in the supply chain. It is also likely that businesses would benefit from increased trade from the construction workforce. The operational phase would offer service and supply contracts over the long-term and could involve businesses in the SIA study area.

The Project is expected to facilitate the growth of industries associated with logistics and freight terminal hubs, and to improve accessibility to markets for businesses in the region. This will support business growth, providing long-term employment for SIA study area residents.

### **Social impact management**

In developing and implementing management measures which will reduce the significance of social impacts to local communities, ARTC will focus on the following key risks:

- Disruption of family lifestyles and farming practices due to property acquisition, expected to include full or partial acquisition of agricultural properties and residential properties, to be addressed through close engagement with affected property owners and property-specific measures agreed with landowners
- Stress and anxiety affecting community members due to concerns about property acquisition or other Project impacts, addressed through mental health partnerships, support for community-managed services and engagement with landowners that may experience impacts on amenity through noise, increased traffic, dust or other impacts, to ensure mitigation measures are effective
- Construction noise that would affect dwellings, community facilities (including childcare centres, schools and health facilities) in Helidon, Gatton, Forest Hill, Laidley and Grandchester, to be addressed through mitigation measures as outlined in EIS Chapter 23: Draft Outline Environmental Management Plan (draft Outline EMP) and through engagement with the Department of Education, church leaders and facility managers
- Construction noise may affect the Gatton Caravan Park, which is being addressed through a consultation process with the caravan park's owner to agree property-specific mitigation for noise impacts. Additional measures will be delivered if a loss of accommodation in the caravan park occurs as a result of the Project
- The Christian Life Centre on the corner of Golf Links Drive and Chadwick Road in Gatton may be directly or indirectly impacted by the Project. Consultation with the Church leaders to explore options for the Church have been undertaken and will continue into the detailed design phase of the Project.
- Impacts on the amenity of dwellings due to rail noise during operations, to be addressed where triggered through mitigation including investigation of concept rail noise barriers, architectural treatments, and enhancements to existing boundary fences

- Impacts on the amenity of town centres including Gatton, Forest Hill and Grandchester due to noise during construction or operation, the effect of construction activities on the towns' character and changes to traffic movements, to be addressed through partnership with LVRC to support amenity enhancements
- Impacts on tourism as the result of changes to views and vistas, to be addressed through support for local tourism marketing.

The SIA includes a Social Impact Management Plan, which includes five Action plans which outline the objectives, outcomes performance measures and actions for mitigation of social impacts. Measures intended to enhance Project benefits and opportunities are also provided. Action plans are provided for the following as summarised below:

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

### ***Community and Stakeholder Engagement Plan***

The Community and Stakeholder Engagement Plan describes how the Project will communicate and engage with community members and other stakeholders throughout the pre-approval, detailed design, pre-construction and construction phases of the Project. The objectives of the Community and Stakeholder Engagement Plan are:

- Establish and maintain engagement mechanisms which build relationships between ARTC and its stakeholders
- 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
- Enable adaptive management of impacts on amenity, connectivity and community values during construction.

The Community and Stakeholder Engagement Plan describes the communication tools, engagement measures (such as regular liaison with landholders, Community Reference Group/s [CRG/s] and stakeholder meetings), specific engagement actions to be implemented in each Project stage, and the responsibilities for community and stakeholder engagement. A summary of the status of ARTC's partnerships and agreements with stakeholders is also provided.

The engagement plan includes a monitoring and reporting framework for community and stakeholder engagement and describes how stakeholder inputs will be incorporated in ongoing development and implementation of SIMP measures.

Upon the completion of the construction phase, the Project will be commissioned as part of the Inland Rail network. Before the completion of the construction phase, ARTC and/or its contractor will develop community and stakeholder engagement strategies for the commissioning phase and the first three years of operations, in accordance with ARTC's established practices.

### ***Workforce Management***

ARTC aims to maximise employment opportunities for residents within the SIA study area by:

- Facilitating skills development opportunities to build regional capacity in construction and rail operation

- Building partnerships with training providers to strengthen workforce skills in the SIA study area, and reduce the potential for cumulative impacts to draw labour and skills from other businesses
- Requiring the Principal Contractor to employ locally, and to implement workforce training and diversity strategies.

The workforce management action plan describes how ARTC will maximise training and employment opportunities for residents in the Lockyer Valley and Ipswich LGAs and manage the potential for impacts on other industries.

ARTC is 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.

Inland Rail Skills Academy initiatives will include targeted local training and business capacity building programs which are being developed in cooperation with community, Council and Government stakeholders.

### ***Housing and Accommodation***

The Housing and Accommodation action plan describes the measures that ARTC will undertake to mitigate potential impacts on housing and accommodation access in the SIA study area.

ARTC will require its Principal Contractor to provide an Accommodation Management Plan (AMP) for ARTC's approval 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.

This action plan includes provisions for monitoring any impacts on housing or accommodation and modifying accommodation management strategies if the potential for negative impacts is identified.

### ***Health and Community Wellbeing***

The Health and Community Wellbeing action plan addresses the potential for impacts on community facilities and services, community safety and mental health, and community wellbeing due to changes to local amenity, community cohesion or local character.

This plan includes measures for cooperation with community and government organisations to maintain the amenity of community facilities and local access to services, including emergency services and mental health services. A more detailed Community Wellbeing Plan will be developed in cooperation with key stakeholders during the detailed design phase and will include:

- Initiatives to upgrade community facilities
- Placemaking initiatives to offset impacts on local character, and/or support recreation or tourism initiatives

- Projects to support community cohesion and resilience
- Cooperation with police and emergency services.

### ***Local Business and Industry Content***

The Local Business and Industry Content action plan addresses the potential for Project impacts on businesses including farms, agribusinesses and tourism-related businesses, and describes ARTC's commitments to ensuring that local and regional businesses benefit from the Project.

ARTC is working with directly affected landowners to develop and implement property-specific measures to mitigate impacts on agricultural land and business uses and is committed to ongoing cooperation with all directly affected landowners and those adjacent to the Project footprint to minimise Project impacts.

ARTC will consult with tourism-related businesses in potentially impacted communities when the Project's detailed design is confirmed regarding potential impacts on tourism businesses related to e.g. the road network or local character, and work with tourism stakeholders to minimise or offset impacts on tourism businesses.

ARTC is committed to providing full, fair and reasonable opportunities for capable local businesses (within the Lockyer Valley, Ipswich and nearby LGAs) and Indigenous businesses to compete and participate in the Project's supply chain. An Australian Industry Participation Plan (AIP Plan) will be prepared to support opportunities for businesses to supply the Project. This will include capacity building programs for local and Indigenous businesses to be delivered as part of the AIP Plan and within the Inland Rail Skills Academy.

### ***Monitoring and reporting***

The SIMP includes a monitoring and reporting framework to:

- Track and enable reporting on delivery of measures which mitigate social impacts or increase community benefits
- Collect data on the effectiveness of mitigation and benefit enhancement measures
- Support identification of corrective actions to improve the effectiveness of management measures.

Proposed roles for Councils and the Project's CRG/s in SIMP implementation and monitoring are included.

ARTC will track SIMP implementation and review performance measures quarterly (where information is available), to facilitate continual improvement of strategies and practices.

ARTC will review the SIMP annually during the construction phase, and where necessary update it based on monitoring results, including stakeholder feedback.

# 1 Introduction

## 1.1 Purpose of the SIA

Australian Rail Track Corporation (ARTC) proposes to construct and operate the Helidon to Calvert (H2C) section (the Project) of Inland Rail.

The Project consists of an approximately 47 kilometre (km) single track dual gauge railway with four crossing loops and includes construction of an approximately 850 metre (m) long tunnel through the Little Liverpool Range.

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 assess how the Project may affect local and regional communities and describe how ARTC will work with stakeholders to ensure that negative social impacts are mitigated, and Project benefits are enhanced.

The objectives of the SIA are to:

- Identify potentially impacted communities, having regard to all potential social impacts throughout the Project's life
- Enable potentially impacted stakeholders and communities to provide inputs to the SIA
- 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 a Social Impact Management Plan and monitoring strategy to support adaptive management of social impacts and opportunities for the Project to benefit local communities.

## 1.2 Project location

The Project will be constructed between Helidon, in the Lockyer Valley Local Government Area (LGA), and Calvert, in the Ipswich LGA. To the west, the Project is adjoined by the Gowrie to Helidon (G2H) project and to the east, by the Calvert to Kagaru (C2K) project.

The Project involves:

- Construction and operation of rail infrastructure including culverts, bridges, a tunnel through the Little Liverpool Range, crossing loops, and a connection to the existing West Moreton System rail corridor
- Ancillary works including road and public utility crossings and realignments.

The Project will generally be within the protected Gowrie to Grandchester future State transport corridor and includes both 'greenfield' (new) sections and 'brownfield' (existing rail corridor) sections. The Project will require the provision of a single track dual gauge line and crossing loops, to accommodate double stack freight trains up to 1,800 m long and be of sufficient width to accommodate future possible upgrades of the track, including a future possible requirement to accommodate trains up to 3,600 m in length. The rail corridor will be of sufficient width to accommodate two passenger tracks for a possible future Queensland DTMR project to provide a passenger transport service, however infrastructure requirements for this possible future service are not within the scope of the Project.



The Project commences at Helidon deviating from the existing West Moreton System rail corridor along Airforce Road, and continues south-east, crossing the Warrego Highway, continuing east between the highway and the West Moreton System rail corridor until it runs parallel with the West Moreton System rail corridor just north of Placid Hills.

The new track continues parallel to the north of the West Moreton System rail corridor, through Gatton and Forest Hill. From Forest Hill, the track deviates from the West Moreton System rail corridor in a south-east direction just north of Laidley township, across Laidley Plainlands Road. The preferred alignment then continues and briefly runs parallel to the West Moreton System rail corridor before reaching a new 850 m tunnel section through the Little Liverpool Range.

After exiting the eastern tunnel portal, the Project crosses under the existing Queensland Rail (QR) rail line, and over the Rosewood Laidley Road bypassing the existing Grandchester Station to the south, running parallel to the West Moreton System rail corridor, and then connecting into the proposed C2K rail line and the QR 'West Moreton System rail corridor' west of Calvert.

The Project's location in relation to potentially impacted communities is shown in Figure 4-2.



## 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 Commonwealth Government Minister for the Environment under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) and was determined to be ‘a controlled action’ requiring an EIS. The EIS prepared for the Project 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 (2018) as addressed below. The SIA also considers local and regional planning objectives as outlined in Section 2.4.

### 2.1 State Development and Public Works Organisation Act 1971

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) manage major infrastructure projects, declare a project to be a ‘coordinated project’, coordinate environmental impact assessment of the 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 EIS Terms of Reference

The EIS ToR include general EIS requirements and specific SIA information requirements as summarised below.

The ToR state that the objectives of the EIS are to ensure that all relevant environmental, social and economic impacts of the Project are identified and assessed, and to recommend mitigation measures to avoid or minimise adverse impacts. Relevant ‘mandatory EIS requirements’ (ToR Section 6) which have been addressed by the SIA include, in summary:

- Identify and describe the environmental (i.e. social) values that must be protected
- Include both the short and long-term impacts and state whether any relevant impacts are likely to be irreversible, including discussion of scenarios of unknown and unpredictable impacts
- Provide a concise summary and assessment of the Project’s impacts and cumulative impacts, with the measures proposed by ARTC to avoid, minimise, mitigate, manage and/or offset impacts
- Observe the preferred hierarchy for managing likely impacts (i.e. avoid impacts, minimise/mitigate impacts and offset impacts once avoidance and mitigation have been applied)
- Provide detailed strategies for the protection or enhancement of relevant environmental values in terms of measurable outcomes, including monitoring and an adaptive management approach.

An appropriate public consultation program involving Local, State and Commonwealth government agencies, and potentially impacted communities is required. A consultation report detailing the consultation process and outcomes is provided as EIS Appendix C: Consultation report.

The ToR’s objectives for the SIA are: “The construction and operation of the Project will aim to: (a) avoid or mitigate/manage adverse social impacts arising from the Project and (b) capitalise on opportunities potentially available for local industries and communities”.

The ToR’s detailed requirements for SIA have been addressed as shown in Table 2-1.

**Table 2-1 SIA Terms of Reference**

TOR Section	TOR No.	Terms of Reference	SIA Section
<b>Social - Information requirements</b>	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.	SIA report
	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 impacts (positive and negative) on affected communities. The proposed mitigation measures are to be discussed.	6.2, 7, 8
	11.142	The SIA is to include:	
		(a) a profile of key stakeholders	4.3.1
		(b) a social baseline study of potentially impacted communities within the SIA study area	5.1 – 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	2.1 - 2.5, 8.1.6
		(d) an explanation of sources used to gather information and analysis methods used. Discuss rationale for both primary and secondary data	3.1 – 3.9
		(e) a description of how the potentially impacted communities and affected stakeholders were engaged and consulted with during the development of the SIA	6.2
		(f) identification of potential social impacts and their likely significance, including duration	7.1 – 7.6
		(g) the proponent’s proposed enhancement and mitigation/management measures in relation to Project impacts	8.1 – 8.6
(h) details of the proponent’s proposed monitoring and reporting framework	8.7		
<b>Social - Existing environment (SIA study area)</b>	11.143	Define the Project’s SIA study area (including the local, district, regional and state level as relevant), taking into account the:	4.2
		(a) potential for social impacts to occur	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)	5.1.4
		(c) location and types of physical and social infrastructure, settlements and land use patterns	5.1, 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	5.3

TOR Section	TOR No.	Terms of Reference	SIA Section
		(e) indigenous social and cultural characteristics, such as native title rights and interests, and cultural heritage	5.1.1
<b>Social - Existing environment (social baseline study)</b>	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	5.1 – 5.7
	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	5.1 – 5.7
<b>Social - Existing environment (community engagement)</b>	11.146	A consultative and inclusive community and stakeholder engagement process should inform the baseline study, assessment of potential Social Impact Assessments 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)	6.1, 6.2, 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	6.1, 6.2
<b>Social - Potential impacts and mitigation (impact assessment)</b>	11.148	Assess and describe the type, level and significance of the Project's Social Impact Assessment (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 Impact Assessments will be identified by considering the potential changes to key aspects included in the social baseline study as a result of the Project	7.1 – 7.6, 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	7.3.2
		(b) workforce	7.2
		(c) lifestyles and amenity	7.1.3 – 7.1.6
	(d) community values	7.1.5 – 7.1.10	

TOR Section	TOR No.	Terms of Reference	SIA Section
		(e) housing	7.3
		(f) local and regional planning outcomes	2.5, 8.1.6
		(g) social infrastructure	7.4.1 – 7.4.4
		(h) the health and social/cultural wellbeing of families and communities	7.4.5 – 7.4.8
	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 an access to community infrastructure, services and facilities (including social and health services and facilities)	7.6
	11.151	The impact assessment should include:	
		(a) the impacts identified by the SIA process	7.1 – 7.6, 9
		(b) impacted stakeholders	6.2, 9
		(c) the timing or timeframes of impacts and the mitigation and management measures	7.1 –7.6, 8.1– 8.6
		(d) description of the mitigation and management measures	8.1 – 8.6
		(e) defined outcomes, and the performance indicators and targets to achieve the outcomes	8.1 – 8.6, 8.7
		(f) monitoring and reporting framework	8.7
		(g) residual impacts (after mitigation and management measures) and how these will be addressed	9, 10
<b>Social - Potential impacts and mitigation (management plans)</b>	11.152	Management plans for the following are to be provided as part of the SIA:	
		(a) community and stakeholder engagement	8.2
		(b) workforce management	8.3
		(c) housing and accommodation	8.4
		(d) local business and industry content	8.6
		(e) health and community wellbeing	8.5

### 2.3 SIA Guideline

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

The SIA guideline requires that the type, level and significance of the Project’s social Impacts (both negative and positive) must be analysed and described, based on the outcomes of the community engagement, social baseline study and impact analysis processes, and considering the potential changes to key aspects included in the social baseline study as a result of the Project. This will include assessment of the potential scope and significance of impacts at the local and regional level including cumulative impacts. Key factors for consideration include:

- Population and demographic changes
- Workforce
- Lifestyles and amenity
- Community values
- Housing
- Local and regional planning outcomes
- Social infrastructure
- The health and wellbeing of families and communities.

Community and stakeholder engagement requirements include commencement of engagement at an early stage of the EIS process and the involvement of stakeholders including affected landowners, local residents, community groups, traditional owners, state and local government agencies, and non-government organisations, local businesses and traditionally-underrepresented stakeholders including Indigenous people and young people. This is discussed in Section 6.

The ToR require management plans for each impact area as part of a SIMP provided in Section 8.

The SIA responds to the SIA Guideline as outlined in Table 2-2.

**Table 2-2 Compliance with SIA Guideline 2018**

Guideline requirement	SIA section
Consideration of the Guideline’s key matters, for the full life cycle of the Project	Sections 4.4 and 7
Analysis of the nature and scope of the Project, potentially impacted communities and the sensitivity of the social environment	Section 4
A description of how the potentially impacted communities and stakeholders were consulted during the development of the SIA as part of a meaningful, inclusive and transparent engagement process	Section 6
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	Section 5
Assessment of social impacts and opportunities across all relevant issue categories, for each stage of the Project lifecycle, including cumulative impacts	Sections 7 and 9
Integration with the EIS process, including consideration of the social consequences of technical matters assessed in other parts of the EIS	Section 7.1 and 7.4
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.	Section 8

## 2.4 State, regional and local plans and policies

The objectives of Community and Regional Plans relevant to potentially impacted communities are outlined below.

### State Planning Policy (SPP)

The State Planning Policy identifies 17 State interests relating to land development with five key themes:

- Liveable communities and housing
- Economic growth
- Environment and heritage
- Safety and resilience to hazards
- Infrastructure.

State interests for liveable communities that must be considered in making or amending a planning scheme and designating land for community infrastructure include (in summary):

- Providing for quality urban design that reflects and enhances local character and community identity
- Providing attractive and accessible natural environments and public open spaces that are functional, accessible and connected
- Facilitating vibrant places and spaces, diverse communities, and good neighbourhood planning and centres design
- Facilitating the provision of pedestrian, cycling and public transport infrastructure and connectivity within and between these networks
- Planning for cost-effective, well-located and efficient use of community facilities and utilities.

### South East Queensland Regional Plan 2017 (ShapingSEQ)

The South East Queensland (SEQ) Regional Plan (ShapingSEQ) 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 EIS investigation corridor include a dispersed network of urban and rural centres, significant expansion areas, Regional Economic Clusters and infrastructure connections of national significance. Key actions include:

- **Grow:** focusing density in and around appropriate locations along urban corridors, and in areas with superior access to public transport, employment and services
- **Prosper:** Identifying, protecting and growing economic opportunities and synergies within and between Regional Economic Clusters (RECs) which includes the Western Gateway (the intersection of three national highways), the Brisbane West Wellcamp Airport, and the Charlton Wellcamp Enterprise Area, Toowoomba Second Range Crossing (TSRC, now known as the Toowoomba Bypass) and 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 supporting delivery of the Inland Rail
- **Sustain:** Protect and nurture the regional biodiversity network and manage regional landscapes, including 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 Toowoomba City Centre.

Special uses noted in or near the EIS investigation corridor include:

- Principal rural production lands (for horticulture, forestry and grazing) in Lockyer Valley and Ipswich areas as extremely important for long-term food security and export opportunities
- The Helidon Hazardous Industry Precinct
- Borallon Training and Correctional Centre and Southern Queensland Correctional Centre (near Gatton).

Close relationships between SEQ LGAs and surrounding areas including the Darling Downs, and northern New South Wales are noted, including unique social and economic linkages, and extensive infrastructure networks that support mutual social and economic benefits.

### **Regional Development Australia Ipswich and West Moreton Regional Development Plan**

The Australian Government established Regional Development Australia (RDA) to set up regional committees that seek to strengthen economic development. One such committee, the Regional Development Australia Ipswich and West Moreton, focuses on five key economic development areas:

- Food and agriculture
- Infrastructure
- Growth sectors
- Intelligent region
- Tourism.

Key regional priorities within the Ipswich and West Moreton Regional Development Plan (RD Plan) lie within food and agriculture, infrastructure, growth sectors and tourism.

The RD Plan notes the Lockyer Valley region as predominantly rural land used for farming and agriculture, particularly vegetable and grain growing and sheep and cattle grazing. The RDA Plan also notes Ipswich as the fastest growing city in Queensland, with a diverse economy of industries including construction, retail, transport and defence.

The 2018 Project Status Report for RDA Ipswich and West Moreton (RDA 2018) identifies a number of recent investment projects in Lockyer Valley region including the Helidon Travel Centre (Warrego Highway), Philips Road Residential Development, Grantham Agricultural Industry Food Processing Plant, Lockyer District State High School, Gatton Landfill, Lockyer Valley Medical Centre Gatton, Lockyer Valley Cultural Centre, upgrades at the University of Queensland (UQ) Gatton Campus, and various temporary and short-term accommodation options. The RDA also identifies Ipswich LGA as the recipient of numerous investment projects in 2018. Of note, these investments include the redevelopment of Ipswich City CBD, planning for Ipswich Hospital, and numerous residential developments.

### **Lockyer – Our Valley Our Vision**

'Lockyer – Our Valley, Our Vision' Community Plan 2027 (LVRC 2017) sets out the ten-year vision for the region based on strategic objectives which address the key focus areas of:

- Community
- Leadership
- Farming



- Business
- Livelihood
- Planned
- Nature.

The Plan continues to position the Lockyer Valley as a leading agricultural production zone in Australia. Gatton is identified as the region's principal rural activity centre supporting future growth of the business, retail and commercial, government and health sectors. Laidley and Plainlands are also identified as growth areas for local service provision, to supplement the role of Gatton. The Plan identifies that effective management of the region's projected population growth to 2031 is one of its greatest future challenges.

### **Lockyer Valley Economic Development Plan 2018 – 2023**

The Lockyer Valley Economic Development Plan 2018 – 2023 was prepared for LVRC in 2018 (Stafford Strategy, 2018), building on the outcomes of a 2013 Plan and Strategy, updating the economic baseline, and re-evaluating regional economic development strategies. The Economic Development Plan notes that the regional economy is primarily driven by the agricultural industry, with opportunities to stimulate further economic growth to be leveraged from including extracting maximum value from the agricultural sector, proximity to Brisbane and the Gold Coast, accessibility via the Warrego Highway and nearby airports, and the University of Queensland Gatton Campus.

Key opportunities identified included:

- Securing government funding for additional water
- Activating the Gatton West Industrial Site (GWIZ)
- Supporting infrastructure for the Inland Rail project
- Developing food-based tourism
- Town centre activation in Gatton, Laidley, Withcott and other centres
- Skills development across various sectors
- Continuing to grow the Lockyer Valley as a major logistics and freight distribution centre.
- Improving environmental sustainability.

### **Grantham Reconstruction Area Development Scheme 2011**

The Grantham Reconstruction Area Development Scheme outlines the blueprint for the reconstruction of Grantham after the flooding events in 2011. The Queensland Reconstruction Authority and Lockyer Valley Regional Council (LVRC) developed the scheme in consultation with the local community.

The Grantham Reconstruction Area was declared by regulation on 8 April 2011. The Development Scheme regulates development within the Grantham Reconstruction Area.

The Project traverses the Grantham Reconstruction Area. The land use intent for the area as determined by the development scheme has been taken into consideration when determining impacts of the Project on future land use in the area.



### 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 Inland Rail and identifies the need to support the planning, design and delivery of the Project as a key short-term action.

### Advance Ipswich

Ipswich City Council’s (ICC) 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, which is preparing itself to be home to 520,000 people by 2041 (26 per cent infill, 74 per cent greenfield). 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 Goals with supporting Strategies and Key Actions. Council’s role in the delivery of each Key Action is also articulated to provide management, support or advocacy.

## 2.5 Summary of alignment with planning priorities

The Project will support local and regional planning outcomes as outlined in Table 2-3. Potential impacts on planning priorities such as impacts on tourism, agricultural land and connectivity are discussed in the draft EIS as referenced.

**Table 2-3 Project alignment with planning priorities**

Document	Alignment with planning priorities
<b>State Planning Policy Themes</b>	<ul style="list-style-type: none"> <li>■ Project use of Gowrie to Grandchester protected future State transport corridor to minimise impacts on the liveability of local communities</li> <li>■ Support for regional economic growth, for the long-term</li> <li>■ Provision of freight rail infrastructure</li> </ul>
<b>ShapingSEQ</b>	<ul style="list-style-type: none"> <li>■ Support for economic opportunities and synergies within and between Regional Economic Clusters</li> <li>■ Support for the development of interconnected communities that move freight efficiently</li> <li>■ Recognition of the regional biodiversity network</li> </ul>
<b>Ipswich and West Moreton RDA Plan</b>	<ul style="list-style-type: none"> <li>■ Consideration of landowners’ use of their properties for agriculture and tourism in designing the Project.</li> <li>■ The potential for impacts on connectivity is assessed in the SIA (refer to Section 7.1.10).</li> </ul>

Document	Alignment with planning priorities
<b>Advance Ipswich</b>	<ul style="list-style-type: none"> <li>■ Support for a strong and sustainable regional economy, and for the growth of industry and business activities</li> <li>■ Respect for the balance between the development of built infrastructure and the conservation of natural and cultural resources</li> </ul>
<b>iGo</b>	<ul style="list-style-type: none"> <li>■ Contribution to delivery of an effective and efficient freight transport network</li> </ul>
<b>Grantham Reconstruction Area Development Scheme</b>	<ul style="list-style-type: none"> <li>■ Project is located along the northern boundary of the Grantham Reconstruction Area, and does not traverse residential properties or community facilities</li> </ul>
<b>Lockyer – Our Valley Our Vision</b>	<ul style="list-style-type: none"> <li>■ Use of existing brownfield corridor to minimise impacts on farming land. Project impacts on agricultural land are discussed in the SIA at Section 7.5.1</li> <li>■ Provision of training, development and employment opportunities for LVRC residents</li> <li>■ The potential for impacts on scenic landscapes has been considered in the EIS (Chapter 10: Landscape and visual amenity).</li> <li>■ The potential for impacts on tourism is discussed in the SIA at Section 7.5.4.</li> </ul>
<b>Lockyer Valley Economic Development Plan 2018 – 2023</b>	<ul style="list-style-type: none"> <li>■ Potential to activate the GWIZ</li> <li>■ Potential to support existing strengths in freight/logistics businesses</li> <li>■ Potential to increase the skills levels of the LGA’s labour force</li> </ul>

### 3 Methodology

The provision of a transparent and rigorous SIA assists to develop a project's 'social licence to operate' which refers to the level of acceptance or approval of the Project by its stakeholders, especially local impacted communities (Vanclay et al, 2015).

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 study area and the scope of assessment
- Developing a social baseline which combines quantitative and qualitative data to provide a detailed picture of existing conditions in local and regional communities
- Assessing the likelihood, nature and distribution and potential social impacts and benefits
- 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 for social conditions and stakeholders.

#### 3.1 Stakeholder engagement

ARTC has undertaken a comprehensive community and stakeholder engagement process to ensure that community members in the SIA study area are aware of the Project design and potential impacts and benefits and are provided with updates as design documentation and assessment reports are developed. This has ensured that residents are informed about the Project and its potential impacts as the basis of their participation in the EIS process.

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

- SIA team participation in community information sessions (June-July 2018) to speak with residents, landowners and business owners
- Attendance at Community Consultative Committee (CCC) meetings to provide information about the SIA scope, process and impacts being assessed
- SIA team participation in a community meeting organised by the Lockyer Valley Tourism Association to discuss potential impacts on tourism
- SIA team participation in community information sessions (November 2018), to discuss residents' views on the Project's potential social impacts and benefits.

SIA-specific engagement was also undertaken to ensure that directly affected stakeholders and other community members had the opportunity to provide informed input to the social baseline, impact assessment and mitigation. SIA-specific engagement is detailed in Section 6.2 and included:

- A community survey
- Meetings with LVRC and ICC managers to discuss community concerns, potential social impacts and benefits, and potential mitigation measures

- Workshops with community organisations and Government agencies to discuss social infrastructure access, community concerns about the Project and potential impacts and mitigation measures including:
  - Liworaji Aboriginal Corporation
  - Uniting Care Community Ipswich
  - Salvation Army Employment Plus
  - Department of State Development, Manufacturing, Industry and Planning (DSDMIP), now known as the Department of State Development, Infrastructure, Local Government and Planning (DSDILGP)
  - DTMR
  - Department of Employment, Small Business and Training (DESBT)
  - Department of Education
  - Department of Communities, Disability Services and Seniors (DCDSS), with the Communities division now part of the Department of Communities, Housing and Digital Economy (DCHDE)
  - Department of Aboriginal and Torres Strait Islander Partnerships (DATSIP) which is now part of Department of Seniors, Disability Services and Aboriginal and Torres Strait Islander Partnerships (DSDSATSIP)
  - Queensland Ambulance Service (QAS)
  - Department of Housing and Public Works (DHPW) with the Housing division now part of DCHDE
  - Queensland Health (QH)
  - Queensland Police Service (QPS)
  - Commonwealth Department of Infrastructure, Transport, Regional Development and Communications (DITRDC)
- Meetings with the Yuggera Ugarapul People
- Meetings with the Office of Coordinator-General.

A profile of Project stakeholders and their key issues in relation to the SIA is provided in Section 4.1 The results of stakeholder engagement are provided in Section 6 and have been incorporated throughout the assessment.

### 3.2 Scoping

The purpose of the SIA scoping process is to identify potentially impacted communities and define the focus for assessment by considering:

- Statutory requirements and guidelines
- Stakeholder inputs of relevance to the SIA
- The nature and scale of the Project and its interactions with stakeholders and communities as identified by:
  - Consultation with landowners and other residents living near the Project
  - Existing social conditions in local communities
  - Native Title rights and other interests held by Indigenous people

- The Project’s interactions with the settlement pattern, including urban and rural centres, land uses and infrastructure
- Potential social impacts and benefits throughout the Project lifecycle, based on 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 these factors, the SIA study area was defined, and potential impacts and benefits were identified. The outcomes of the scoping process are reported in Sections 4.2 and 4.4.

### 3.3 Social baseline

Investigations undertaken to develop the social baseline included research and analysis of:

- Potentially impacted communities’ history, land use and settlement pattern
- Population size, composition and growth
- Demographic characteristics
- 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 and social infrastructure (community facilities, services and networks).

Stakeholder engagement outcomes assisted to define community values and validate research findings.

### 3.4 Impact assessment

Impacts were assessed for the construction and operational phases of the Project. As the Project has a design life of 100 years during which time social and economic conditions will change considerably, the social impacts of Project decommissioning cannot be foreseen and are not discussed in the SIA.

The SIA includes assessment of potential cumulative impacts in relation to the adjoining Inland Rail sections and other major projects in the Lockyer Valley and Ipswich LGAs. A summary of the assessment methods and data sources is provided in Table 3-1.

**Table 3-1 SIA assessment methods**

Social domains	Assessment method	Data sources	Rationale
<b>Community and stakeholder engagement</b>	<ul style="list-style-type: none"> <li>■ Stakeholder analysis as part of SIA scoping</li> <li>■ Analysis of stakeholder engagement inputs</li> <li>■ Analysis of planning context</li> <li>■ Analysis of community values</li> </ul>	<ul style="list-style-type: none"> <li>■ Primary: collected through stakeholder engagement outcomes (community survey, community information sessions, meetings and interviews)</li> <li>■ Secondary: Regional and Community Plans</li> </ul>	<ul style="list-style-type: none"> <li>■ Stakeholder inputs are central to SIA</li> <li>■ Regional and community plans provide an overview of community values, informed by extensive stakeholder engagement</li> </ul>

Social domains	Assessment method	Data sources	Rationale
<b>Settlement pattern</b>	<ul style="list-style-type: none"> <li>Identify the distribution and key indicators of the population in the SIA study area</li> <li>Describe potentially impacted communities and land uses</li> <li>Compare Project elements to the baseline to identify potential changes to social values</li> <li>Identify potential negative impacts on the use and amenity of properties and communities</li> </ul>	<ul style="list-style-type: none"> <li>Primary: corridor scan (physical and via aerial maps)</li> <li>Secondary data: Planning Schemes, Regional Plans</li> </ul>	<ul style="list-style-type: none"> <li>Scanning the corridor enables identification of communities, localities and features which may be impacted</li> <li>Planning schemes and regional plans identify the current and likely future of land uses</li> </ul>
<b>Population, housing, employment and skills</b>	<ul style="list-style-type: none"> <li>Demographic analysis and research</li> <li>Identify potential impacts on population, housing and labour demand based on population projections, labour force profile and Project workforce estimates</li> </ul>	<ul style="list-style-type: none"> <li>Primary: Project workforce estimates</li> <li>Secondary: Australian Bureau of Statistics (ABS) Census of 2016, Queensland Government Statistician’s Office (QGSO) Profiles and Projections, and other sources as referenced</li> </ul>	<ul style="list-style-type: none"> <li>The Project’s estimates of workforce numbers are key inputs to the assessment</li> <li>The ABS Census provides the most consistent and reliable demographic data available for a large number of indicators</li> </ul>
<b>Social infrastructure</b>	<ul style="list-style-type: none"> <li>Profile the provision of social infrastructure servicing local and regional communities</li> <li>Consult social infrastructure providers to identify local vulnerabilities, potential impacts on social infrastructure, community capacity to address social impacts, and strategies to reduce impacts and enhance Project benefits</li> <li>Identify potential impacts on social infrastructure, and describe the potential for the Project to affect social infrastructure functions, either directly or indirectly</li> </ul>	<ul style="list-style-type: none"> <li>Primary: stakeholder engagement outcomes, social environmental scan outcomes and population modelling</li> <li>Secondary: desktop research of various websites and databases as referenced</li> </ul>	<ul style="list-style-type: none"> <li>A combination of sources is required to identify the distribution and where known, capacity of social infrastructure</li> </ul>

Social domains	Assessment method	Data sources	Rationale
<b>Community values (e.g. amenity, cohesion, community identity, rural values)</b>	<ul style="list-style-type: none"> <li>Community survey to identify community values</li> <li>Analysis of values identified in community and regional plans and reports</li> <li>Identify Project design and management measures relevant to community values</li> <li>Describe the potential for Project impacts to affect community values</li> </ul>	<ul style="list-style-type: none"> <li>Primary: stakeholder engagement outcomes, Project design and management measures</li> <li>Secondary: community and regional plans</li> </ul>	<ul style="list-style-type: none"> <li>Stakeholder inputs are a key source for identification of community values</li> <li>Regional and community plans provide an overview of community values,</li> </ul>
<b>Health and wellbeing</b>	<ul style="list-style-type: none"> <li>Consultation and research to identify community health and safety status</li> <li>Consultation with service providers to identify any changes to facilities' access or amenity</li> <li>Consideration of changes to social conditions and the physical environment which may affect human health, community wellbeing or community safety</li> </ul>	<ul style="list-style-type: none"> <li>Primary: Stakeholder engagement outcomes</li> <li>Secondary: ABS Census of Population and Housing 2016, Population Health Information Data Unit (PHIDU) data, EIS technical assessments (refer Section 3.5)</li> </ul>	<ul style="list-style-type: none"> <li>Stakeholder inputs are a key source for identification of community health determinants and potential impacts on social infrastructure</li> <li>ABS Census provides consistent data on socio-economic health determinants</li> <li>PHIDU provides specialised datasets relating to health status</li> </ul>
<b>Business and Industry</b>	<ul style="list-style-type: none"> <li>Analysis of the distribution, type and size of business in local communities, and profiling of regional businesses with relevant capabilities</li> <li>Engagement with businesses to identify opportunities for participation in the Project</li> </ul>	<ul style="list-style-type: none"> <li>Primary: Stakeholder engagement outcomes</li> <li>Secondary: ABS data and other sources as referenced</li> </ul>	<ul style="list-style-type: none"> <li>Stakeholder inputs are a key source for identification of potential impacts on businesses</li> <li>ABS data and other data as referenced provide insights into the distribution of businesses</li> </ul>

Table 3-2 provides information on the reliability of data used in the SIA.

**Table 3-2 Data quality summary**

Data type/set	Source	Currency	Reliability
<b>Demographic data</b>	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
<b>Population and housing projections</b>	Queensland Government Statistician's Office	2016	Uncertainties regarding effect of newly proposed projects and economic trends on projections
<b>Housing data</b>	ABS Census of Population and Housing SQM Research	2016, 2019	Uncertainties regarding effect of cumulative impacts and economic trends on housing markets
<b>Public Health Information Development Unit (PHIDU)</b>	ABS Census of Population and Housing and other sources as referenced	Variable, as referenced	Local relevance of modelled estimates
<b>Social infrastructure provision</b>	Stakeholder feedback and various research sources	2018	Potential for gaps in capacity data
<b>Labour force</b>	Department of Jobs and Small Business Labour Market Portal	2019	Subject to seasonal fluctuations and under-representation of rural unemployment
<b>Research references</b>	As referenced	Various	Lack of certainty about the relevance of international references to the Project region

### 3.5 Integration with EIS 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 3-3.

**Table 3-3 Links to EIS Findings**

Topic	Key issues	EIS Chapter/Appendix	SIA Section
<b>Project description</b>	<ul style="list-style-type: none"> <li>Project elements potentially affecting the social environment</li> </ul>	Chapter 6	4.1.6
<b>Stakeholder Engagement</b>	<ul style="list-style-type: none"> <li>Outcomes of ARTC engagement for the EIS</li> </ul>	Chapter 5 and Appendix C	6.1
<b>Cultural heritage</b>	<ul style="list-style-type: none"> <li>Impacts on cultural values</li> </ul>	Appendix S	7.1.1, 7.1.7
<b>Landscape and Visual Amenity</b>	<ul style="list-style-type: none"> <li>Impacts on visual amenity</li> </ul>	Appendix H	7.1.6, 7.1.7
<b>Land use and tenure</b>	<ul style="list-style-type: none"> <li>Existing and proposed land use</li> <li>Properties to be acquired</li> </ul>	Chapter 8	7.1.2
<b>Terrestrial and aquatic ecology</b>	<ul style="list-style-type: none"> <li>Measures addressing the safe passage of fauna</li> </ul>	Appendix I	7.1.4
<b>Traffic impacts</b>	<ul style="list-style-type: none"> <li>Changes to traffic network and travel times</li> </ul>	Appendix U	7.1.10



Topic	Key issues	EIS Chapter/Appendix	SIA Section
<b>Economic impact</b>	<ul style="list-style-type: none"> <li>Employment benefits and impacts</li> </ul>	Appendix R	7.2.1
<b>Land resources</b>	<ul style="list-style-type: none"> <li>Potential for land contamination to affect health</li> </ul>	Chapter 9	7.4.5
<b>Air quality</b>	<ul style="list-style-type: none"> <li>Assessment findings in relation to health</li> </ul>	Appendix K	7.4.5
<b>Noise and vibration</b>	<ul style="list-style-type: none"> <li>Assessment findings in relation to amenity and health</li> </ul>	Appendices O (Construction) and P (Operation)	7.1.3, 7.1.4, 7.4.5
<b>Hydrology and flooding</b>	<ul style="list-style-type: none"> <li>Changes to flooding patterns affecting houses and farms</li> </ul>	Appendix M	7.4.5
<b>Groundwater</b>	<ul style="list-style-type: none"> <li>Changes to water access</li> </ul>	Appendix N	7.5.1
<b>Surface water</b>	<ul style="list-style-type: none"> <li>Surface water quality potentially affecting health</li> </ul>	Appendix L	7.4.5
<b>Waste and resource management</b>	<ul style="list-style-type: none"> <li>Potential impacts on waste management facilities</li> </ul>	Chapter 21	7.4.5
<b>Hazard and risk</b>	<ul style="list-style-type: none"> <li>Potential impacts on community safety</li> </ul>	Chapter 20	7.4.8
<b>Impacted properties</b>	<ul style="list-style-type: none"> <li>Potential to impact on farming and grazing properties</li> </ul>	Appendix G	7.5.1
<b>Environmental management</b>	<ul style="list-style-type: none"> <li>Management measures which address environmental impacts</li> </ul>	Chapter 23	Various

### 3.6 Cumulative impact assessment

Cumulative social impact assessment (CIA) considers the potential for the combined impacts of a set of projects to affect a social environment over time. The SIA considers the potential impacts of Inland Rail's adjacent G2H and C2K projects, and other major projects which may be constructed or operated at the same time as the Project.

The potential area of influence was identified with respect to potential spatial impacts at the local level and social change processes at the local and regional levels. The assessment included:

- Development of a list of applicable projects and operations for consideration in the CIA
- Consideration of the Project's areas of spatial and social influence, and its overlap with applicable projects or operations
- Development of a timeline (construction and operation) to show the temporal relationship between the Project and other projects and operations
- Consideration of social values (e.g. populations, housing demands, labour and skill demands and community values) and the projects which may affect them.

Review of other projects' EISs and associated literature, consideration of cumulative workforce numbers and qualitative analysis identified the potential for cumulative impacts at local and regional levels. Cumulative impacts were considered in evaluating the significance of social impacts and benefits.

### 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 they expected the Project would affect their communities or households

- The likelihood and consequence of potential social impacts and benefits
- ARTC's commitments, and mitigation and enhancement strategies identified as part of the assessment process
- Identification of residual impacts and benefits.

### 3.8 SIMP

The Social Impact Management Plan 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
- Incorporation of ARTC's mitigation and enhancement commitments
- Identifying additional mitigation, management and enhancement measures
- Developing performance measures 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. If approved, the Project will undergo a detailed design phase, during which components such as level crossing designs, road realignments and construction methodologies may be refined. Should the final design and construction methodology differ from the currently available information, social impacts may vary.

With the Constructing Authority and their process for land acquisition yet to be determined, uncertainties include the full number of partial and full acquisitions required to accommodate construction, and the number of properties to be acquired to mitigate unacceptable noise impacts. This assessment includes assumptions about the number of acquisitions required (refer Section 7.1.2). Updates to this assessment may be required when full details are known as noted in Section 8.1.1.

As the construction and operation of new freight rail lines in similar rural and semi-rural settings is uncommon, there is little to no evidence on which to draw regarding social impacts such as changes to property values 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 major projects
- Changes to labour mobility, which in the short-term has been constrained, and in the longer-term may increase as specific industries and regions recover from changes to economic conditions
- Challenges to 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 and cohesion (positive or negative) due to physical distancing measures 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 would 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 and labour force availability will become available during 2020-2021 (see for example Jobseeker and Youth Allowance data provided in Section 5.4.4), whilst data on indicators such as income levels, housing tenure, 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 progresses to detailed design, ARTC will review the available data on key indicators such as labour and housing availability and engage with LVRC and ICC to discuss changes to social conditions in the SIA study area as part of developing detailed implementation strategies for SIMP measures.

## 4 Project description and SIA Scope

This section describes the Project, scoping considerations, the SIA study area, SIA stakeholders and the SIA focus.

### 4.1 Project description

The Project's objectives are to:

- Provide rail infrastructure that meets the Inland Rail specifications, to enable trains using the Inland Rail corridor to travel between Helidon and Calvert, connecting with the eastern end of the G2H Inland Rail Project and the western end of the C2K Inland Rail Project
- 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. The corridor will be of sufficient width to accommodate the infrastructure currently proposed for construction, as well as future expansion, including a possible future requirement for 3,600 m trains, and future proofing for a possible public passenger transport service. The future possible public passenger service would be undertaken by DTMR and as such these future infrastructure requirements are excluded from the Project scope.

The Project will connect with G2H at a tie-in point along Airforce Road, immediately west of Helidon, using the West Moreton System rail corridor, then deviate to follow the Gowrie to Grandchester future State transport corridor through the Grantham area.

The Project re-joins the West Moreton System rail corridor at the rural residential area of Placid Hills, to pass through the town of Gatton, the locality of Lawes, the town of Forest Hill, and the Valley Vista Estate residential area and grazing areas in Laidley North.

Deviating from the existing West Moreton System rail corridor, the Project then follows the Gowrie to Grandchester future State transport corridor, avoiding the Laidley township, entering a proposed tunnel portal at Grandchester near residential and grazing land. The proposed tunnel will run beneath the Little Liverpool Range for approximately 850 m, exiting in an area of native vegetation.

After exiting the eastern tunnel portal, the Project crosses under the existing QR rail line, and over the Rosewood Laidley Road bypassing the existing Grandchester Station to the south, running parallel to the West Moreton System rail corridor, and then connecting into the proposed C2K rail line and the QR West Moreton System rail corridor, west of Calvert.

The Project includes both 'greenfield' (new) sections and 'brownfield' (existing rail corridor) sections. The EIS investigation corridor is generally consistent with the protected Gowrie to Grandchester future State transport corridor which was declared a 'future public passenger transport corridor' in 2005.

The Project will involve construction and operation of:

- A single-track dual gauge rail line with crossing loops to ultimately accommodate trains of up to 3,600 m, but initially constructed for 1,800 m train sets
- The Little Liverpool Range tunnel, bridges and viaducts to accommodate topography and Project crossings of waterways, roads and other infrastructure
- Laydown areas, workspace and access roads
- Embankments and cuttings along the length of the alignment
- Tie-ins to the existing West Moreton System rail corridor at the Project boundary and other potential intermediate locations to be confirmed by operational modelling

- Associated rail infrastructure, including maintenance sidings and signalling infrastructure
- Ancillary works, including road and public utility crossings and realignments.

Ancillary work would include works to level crossings, signalling and communications, signage and fencing, and services and utilities within the EIS investigation corridor.

The delivery method for the Project will involve ARTC contracting with a suitably experienced construction management company (the Contractor).

The Contractor will be responsible for implementation of mitigation measures including the Construction Environmental Management Plan (CEMP) and SIMP.

Construction of the Project is scheduled from 2021 to 2026, with commissioning/operation from 2026.

As described in Section 1.2, the Project is adjoined in the west by the G2H Project and to the east, by the C2K Project.

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

#### **4.1.1 Construction**

The construction program includes the following stages and activities:

- Pre-construction activities and early works, including detailed design, land acquisition, obtaining environmental planning approvals, surveys and geotechnical investigations, establishment of access tracks, and utility and service relocations
- Site preparation, including site clearance, establishment of construction 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
- Civil works, including bulk earthworks, construction of cuts and embankments, construction of tunnel portals and tunnels, installation of permanent drainage controls, bridge and watercourse crossing construction
- Track works, including the installation of ballast, sleepers and rails
- Rail systems infrastructure and wayside equipment, including signals, turnouts and asset monitoring infrastructure
- Commissioning, integration testing and handover process to achieve operational readiness.

Following construction, laydown areas and demountable buildings used during construction will be decommissioned and the areas rehabilitated. Some office facilities may be left within the railway corridor for the commissioning phase. All construction sites, compounds and access routes would be returned to the same or better condition than prior to construction commencing.

#### **4.1.2 Tunnel infrastructure**

The Project proposes a tunnel of approximately of 850 m through the Little Liverpool Range. Construction will involve roadheaders (a track mounted machine with a cutting head mounted on a boom) with multiple roadheaders commencing excavation from each portal simultaneously. Excavation via drilling and blasting methods may also be required.

The tunnel portal areas will require a substation building for power supply, a pump station for the tunnel hydrant system, and an emergency services staging area. The tunnel will be naturally ventilated so no ventilation outlets are required.

### 4.1.3 Operations

Inland Rail as a whole will be operational once all 13 sections are complete, which is estimated to occur in 2026. The Project will form part of the rail network managed and maintained by ARTC and has a design life of 100 years. The Project will initially accommodate double-stacked container freight trains of up to 1,800 m length, with potential for future accommodation of freight trains of 3,600 m length. Train services will be provided by a variety of operators and may include grain, bulk freight, and other commodities.

It is estimated that the operation of Inland Rail will involve an annual average of about 33 train services per day in both directions (northbound and southbound) in 2026. This is likely to increase to up to 46 train services per day in both directions in 2040 with current proposed infrastructure. Train design speeds will range from 80 to 115 kilometres per hour (km/hour).

Operational processes will include:

- Use of the railway for freight purposes
- Operation and maintenance of tunnel ventilation, safety systems and signalling
- General track, infrastructure and corridor maintenance, including occasional major maintenance such as track reconditioning and topping up of ballast.

Standard ARTC maintenance activities will be undertaken during operations, typically 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.

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.

### 4.1.4 Workforce and local business participation

Pre-construction activities are anticipated to require a small number of personnel (likely to be in the order of 20-50 people) over a six-month period.

The size and composition of the construction workforce will vary depending on the construction activities being undertaken and the staging strategy adopted. The core construction workforce will consist of professional staff, supervisors, trades workers and plant operators, with earthworks crews, bridge structure teams, capping and track-works crews working at different periods though the construction phase.

The workforce is expected to peak at 410 full time equivalent (FTE) early in Year 2 of construction. Across the full construction period, an average of approximately 190 personnel are expected to be required.

The construction workforce is expected to be drawn primarily from communities within the Lockyer Valley, Ipswich, Brisbane, Logan, and Toowoomba LGAs, including personnel sourced from nearby communities, with personnel returning to their home bases between shifts. On this basis a workforce accommodation facility is not proposed.

Construction work would be undertaken during the following standard Project construction hours:

- Monday to Friday – 6.30 am to 6.00 pm
- Saturday – 6.30 am to 1.00 pm

- No work on Sundays or public holidays
- Track possessions on a 7 day/24-hour basis.
- Tunnel works – 7 days per week, 24 hours per day, with all activities underground or within acoustic sheds
- Spoil haulage – 7 days per week, 24 hours per day.

Works outside of standard construction hours will occur throughout the duration of the construction program and will involve:

- Delivery of concrete, steel, and other construction materials delivered to site by heavy vehicles
- Movements of heavy plant and materials
- Arrival and departure of construction staff during shift change-overs.
- Roadworks to arterial roads
- Traffic control crews, including large truck mounted crash attenuator vehicles, medium rigid vehicles, and lighting towers
- Incident response including tow-trucks for light, medium, and heavy vehicles.

Works outside of standard hours can be undertaken when compliant with relevant guidelines and requirements as defined in the EIS (refer EIS Chapter 23: Draft Outline EMP).

The Project will require construction supplies, including quarried 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).

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

Once operational, a workforce of approximately 15 to 20 personnel is expected.

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.

#### **4.1.5 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 and reinstatement 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.



Given social and economic changes are likely to be extensive over the next 100 years, the social impacts of Project decommissioning cannot be foreseen and are not discussed in the SIA.

**4.1.6 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
<b>Construction</b>		
<b>Corridor and associated works</b>	<ul style="list-style-type: none"> <li>▪ Establishment of approximately 47 km of new single-track dual gauge railway including four crossing loops, each 2,200 m in length</li> <li>▪ Approximately 24 km of the Project established through the West Moreton System rail corridor</li> <li>▪ Significant embankments and cuttings along the length of the alignment</li> <li>▪ Construction of a tunnel of approximately 850 m through the Little Liverpool Range</li> <li>▪ Identification, establishment and use of quarries for the sourcing of construction materials</li> <li>▪ Construction of temporary site offices</li> <li>▪ Construction workspace and access roads</li> <li>▪ Approximately 32 laydown areas will be required during construction.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Connectivity</li> <li>▪ Community cohesion</li> <li>▪ Agricultural operations</li> <li>▪ Sense of place</li> <li>▪ Residential amenity</li> <li>▪ Privacy and feelings of security</li> <li>▪ Travel behaviour</li> <li>▪ Health</li> <li>▪</li> </ul>
<b>Construction employment</b>	<ul style="list-style-type: none"> <li>▪ A preliminary estimate of the construction workforce is 410 Full Time Equivalent (FTE) personnel at peak. The average number of FTE workforce on site across the full construction period (four years) is 190 people.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Employment and training opportunities</li> <li>▪ Other industries or communities' access to skilled labour</li> </ul>
<b>Rail-road interfaces</b>	<ul style="list-style-type: none"> <li>▪ Road and rail interfaces include 36 public road (formed) interfaces (seven of which will be active level crossings), nine public road (unformed) interfaces, 50 private interfaces and 5 pedestrian interfaces.</li> <li>▪ Road realignments, road closures, construction of grade-separated and level crossings will be required.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Road network access</li> <li>▪ Property access</li> <li>▪ Connectivity between and across properties</li> <li>▪ Property management</li> <li>▪ Stock and equipment movements</li> <li>▪ Traffic congestion/safety issues</li> </ul>



Key elements	Detail	Potential impact areas
<b>Bridges</b>	<ul style="list-style-type: none"> <li>■ The Project requires construction of 31 bridge structures including:                             <ul style="list-style-type: none"> <li>– Thirteen rail bridges over waterways</li> <li>– Six rail-over-waterway-and-road bridges</li> <li>– Six rail-over-road bridges</li> <li>– Four road-over-rail bridges</li> <li>– One rail-over-rail bridge</li> <li>– One pedestrian-over-rail bridge</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ Road network access</li> <li>■ Connectivity</li> <li>■ Rural character</li> <li>■ Noise</li> </ul>
<ul style="list-style-type: none"> <li>■ <b>Operations</b></li> </ul>		
<b>Freight rail operation</b>	<ul style="list-style-type: none"> <li>■ The Project would accommodate double-stacked container freight trains of up to 1,800 m length, with an estimated 33 train movements per day by 2026. The Project would provide sufficient corridor width for potential future operation of freight trains of 3,600 m length. Up to 47 train movements are expected per day by 2040.</li> </ul>	<ul style="list-style-type: none"> <li>■ Residential amenity</li> <li>■ Rural character</li> <li>■ Tourism values</li> <li>■ Community safety</li> <li>■ Regional development</li> <li>■ Health and wellbeing</li> </ul>
<b>Operational employment</b>	<ul style="list-style-type: none"> <li>■ Approximately 15-20 personnel.</li> </ul>	<ul style="list-style-type: none"> <li>■ Local employment and training opportunities</li> </ul>
<b>Level crossings operation</b>	<ul style="list-style-type: none"> <li>■ The Project will have seven active (secured) level crossings.</li> </ul>	<ul style="list-style-type: none"> <li>■ Emergency services access</li> <li>■ Traffic safety and travel times</li> <li>■ Rural character</li> <li>■ Agricultural movements</li> </ul>
<b>Crossing loop operation</b>	<ul style="list-style-type: none"> <li>■ Crossing loops would be located near:                             <ul style="list-style-type: none"> <li>– Helidon – Chainage (Ch) 29.00 km - Ch 31.20 km, with possible future extension between Ch 27.00 km and Ch 31.20 km</li> <li>– Gatton - Ch 44.70 km - Ch 46.90 km, with possible future extension between Ch 44.70 km and Ch 48.70 km</li> <li>– Laidley – Ch 55.00 km – Ch 57.30 km, with possible future extension between Ch 53.30 km – Ch 57.30 km</li> <li>– Calvert - Ch 68.80 km – Ch 71.00 km with possible future extension between Ch 67.00 km and Ch 71.00 km</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ Residential amenity - noise and air quality</li> <li>■ Connectivity</li> </ul>
<b>Track maintenance</b>	<ul style="list-style-type: none"> <li>■ Regular track maintenance would be performed</li> </ul>	<ul style="list-style-type: none"> <li>■ Noise</li> <li>■ Employment</li> </ul>

#### 4.1.7 Potential for cumulative impacts

The Project is likely to be constructed during the same period as other major projects in the Lockyer Valley and Ipswich LGAs, so cumulative social impacts are likely.

The Project adjoins Inland Rail's G2H Project in the west and the C2K Project in the east. Cumulative impacts on amenity or connectivity may occur for communities in the Toowoomba, Lockyer Valley, Ipswich and Scenic Rim LGAs during 2021-26 as the result of the construction and operation of Inland Rail projects.

Localised cumulative impacts on connectivity or amenity are possible if the Project is constructed at the same time as other projects near the EIS investigation corridor. Regional and inter-regional impacts are also possible. Potential cumulative social impacts are discussed in Section 7.6.

## 4.2 SIA study area

The SIA study area was identified by considering:

- The Project's location and activities in relation to population centres and rural localities
- The likely distribution of potential social impacts and benefits at local and regional levels
- The results of ARTC consultation
- The location of other relevant projects which may contribute to cumulative social impacts.

Residents who live within or near the EIS investigation corridor are most likely to experience impacts related to land acquisition, land severance or residential amenity, whilst those who live in nearby communities may experience different impacts e.g. traffic disruptions or changes to the amenity of towns. Residents in the SIA study area as a whole may also experience impacts such as traffic disruptions, and Project benefits are also likely to accrue at the regional level.

The SIA study area includes:

- The EIS investigation corridor as described in Section 4.2.1
- Potentially impacted communities as identified in Section 4.2.2
- The Lockyer Valley and Ipswich LGAs, which equate to the SIA study area as a whole.

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

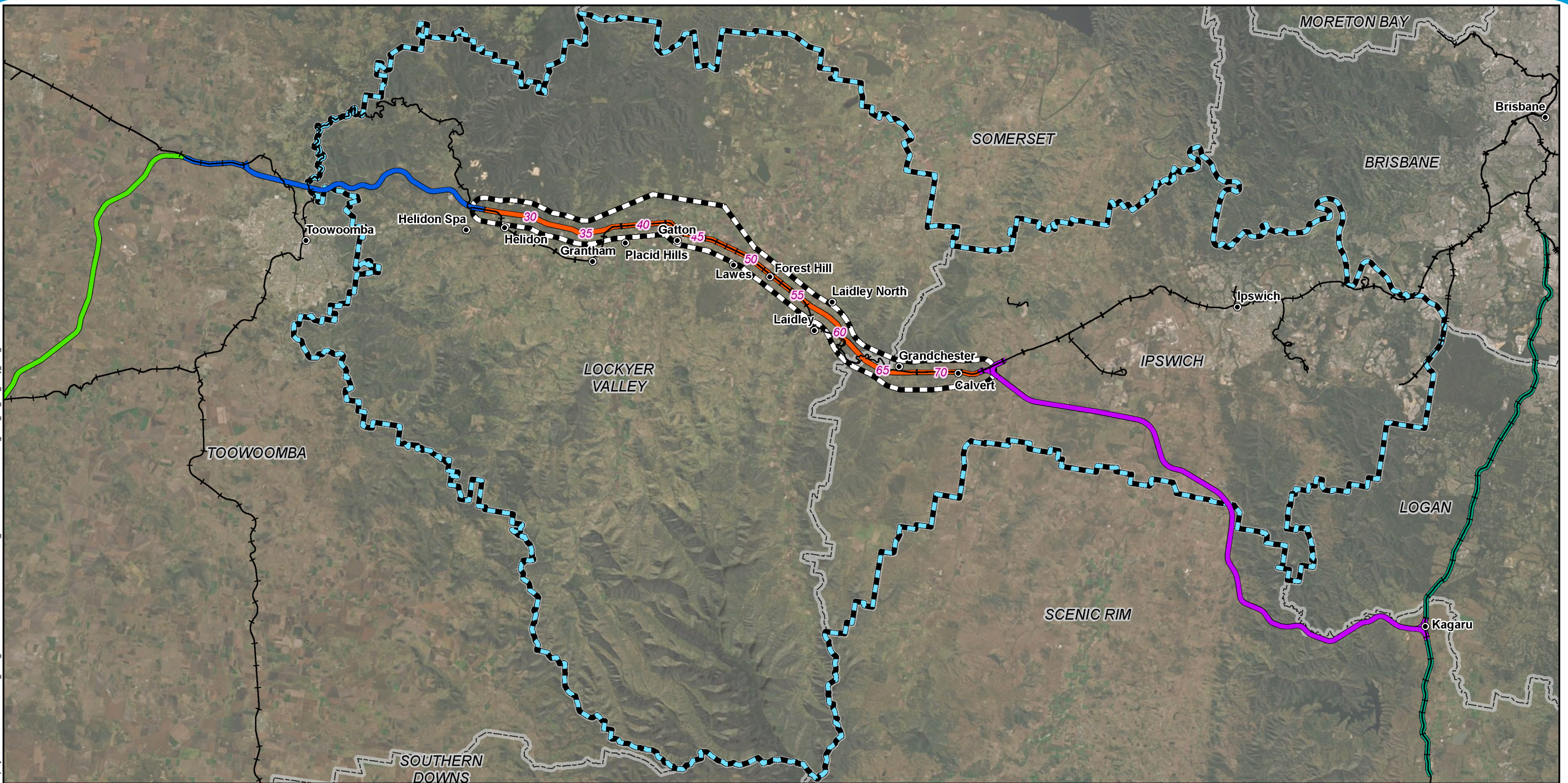
### 4.2.1 EIS investigation corridor

The 'EIS investigation corridor' refers to:

- The rail corridor and associated crossing loops, maintenance sidings, road crossings, bridges, culverts and infrastructure (also described in the EIS as the permanent operational disturbance footprint)
- Land to be used temporarily for construction purposes, including laydown areas, access tracks and work areas (the temporary construction disturbance footprint)
- Areas adjacent and within approximately 1 km of the rail corridor.

The SIA includes analysis of the potential for impacts on landowners and other community members within the EIS investigation corridor, with a key focus on landowners, businesses and tenants within and adjacent to the temporary construction disturbance footprint (which includes the permanent operational disturbance footprint).

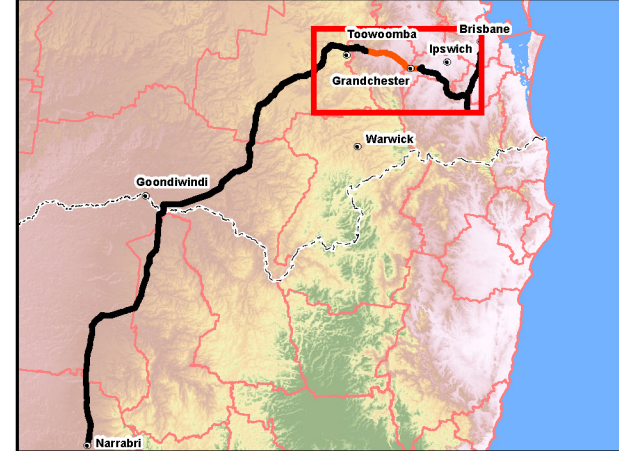




Map by: LCT\WIGN.Z\GIS\GIS\_3300\_H2C\Tasks\330-EAP-20202130942\_SIA\330-EAP-20202130942\_FF\IV\_4.1\_SIA\_study\_area\_v2.mxd Date: 20/06/2020 14:35

**Legend**

- 5 Chainage (km)
- Localities
- + Existing rail
- B2G project alignment
- G2H project alignment
- H2C project alignment
- C2K project alignment
- K2ARB project alignment
- Study area
- EIS investigation corridor
- Local Government Areas



**Helidon to Calvert**  
**Figure 4.1: SIA study area**



Key characteristics of Statistical Area 1 (SA1) areas within 1 km of the Project were identified (refer Section 5.2.1) in order to understand population distribution and potential community vulnerabilities. Figure 5-1 (Section 5.2) shows the location of the EIS investigation corridor in relation to SA1s.

#### 4.2.2 Potentially impacted communities

Towns and rural residential areas in and near the EIS investigation corridor have been identified as potentially impacted communities, as the Project's social impacts are likely to result from changes to the environment (e.g. changes to land uses, road networks, noise levels, air quality or scenic character), or changes to social conditions (e.g. community cohesion, the amenity of towns and access to community facilities) in these communities.

The Project would pass near or through the following potentially impacted communities in the Lockyer Valley and Ipswich LGAs:

- On the northern border of Helidon Spa and approximately 200 m north of the town of Helidon
- Through the northern part of Grantham
- Through the rural residential community of Placid Hills
- Through the town of Gatton, crossing the Warrego Highway
- Through Lawes, which is primarily farming land, but includes the University of Queensland's Gatton campus
- Through the town of Forest Hill
- Through the Laidley North rural residential community
- In tunnel, under the rural residential community to Laidley's east
- Through the town of Grandchester
- To the immediate north of the town of Calvert.

These communities have been considered in detail in the SIA.

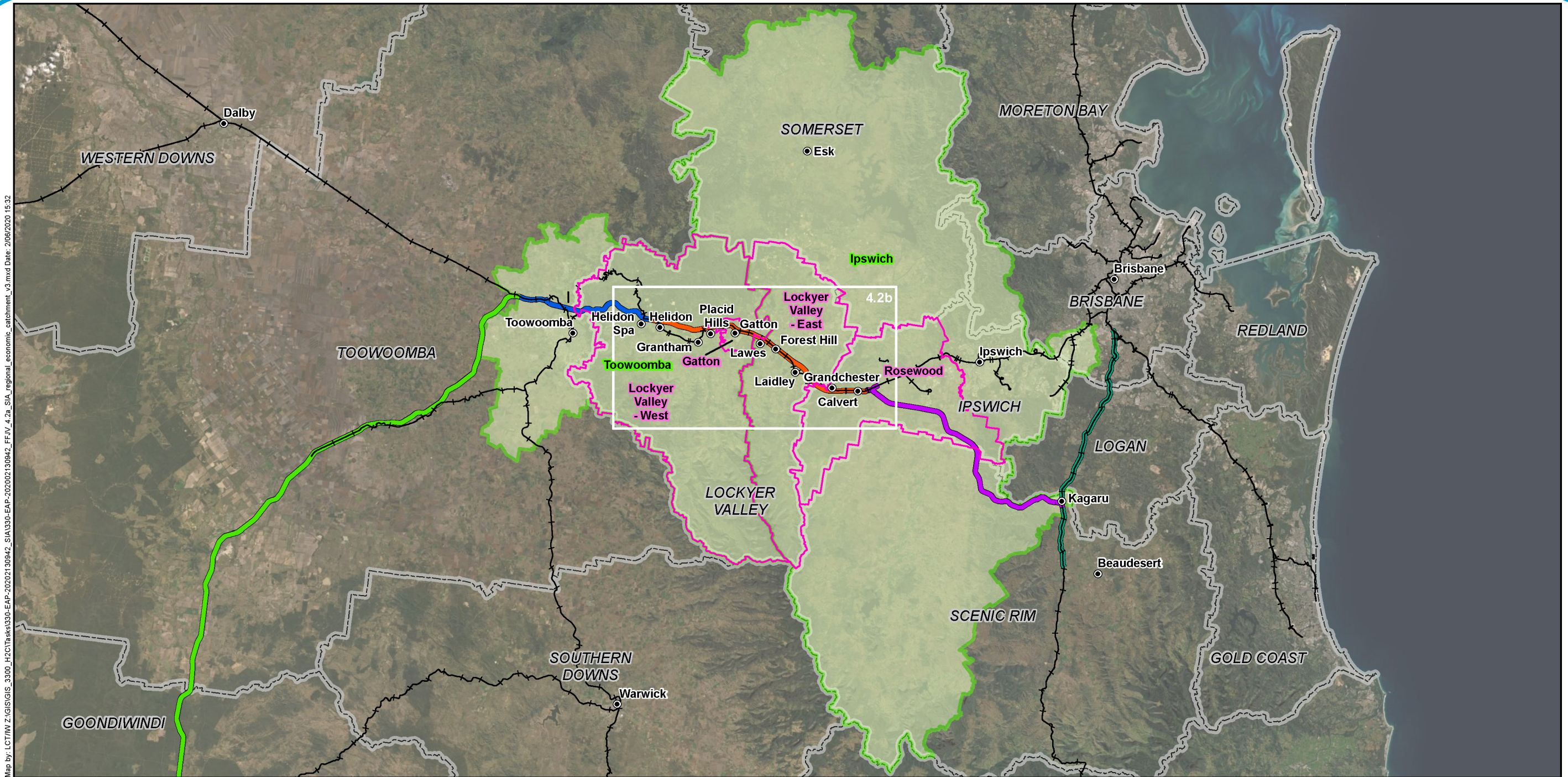
#### 4.2.3 Project region

From Helidon to east of Laidley, the Project is within the Lockyer Valley LGA, which was created in 2008 through the amalgamation of the Gatton and Laidley Shires. From just west of Grandchester to west of Calvert, the Project is within the Ipswich LGA.

Community members and other stakeholders in the Lockyer Valley and Ipswich LGAs may experience Project impacts such as traffic disruptions or increased demand for services during construction and may benefit from Project employment and Project supply opportunities.

The Lockyer Valley and Ipswich LGAs form the overall SIA study area and comprise the regional economic catchment (shown in Figure 4-2).

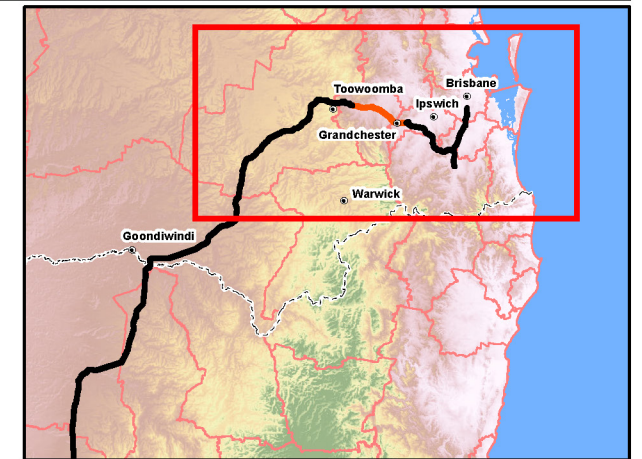




Map by: LCT/IV Z:\GIS\GIS\_3300\_H2C\Task\330-EAP-2020\2130942\_SIA\330-EAP-2020\2130942\_FF.V\_4.2a\_SIA\_regional\_economic\_catchment\_v3.mxd Date: 2/06/2020 15:32

**Legend**

- Localities
- Existing rail
- B2G project alignment
- G2H project alignment
- H2C project alignment
- C2K project alignment
- K2ARB project alignment
- ▭ Local Government Areas
- ▭ SA4 boundary
- ▭ SA2 boundary

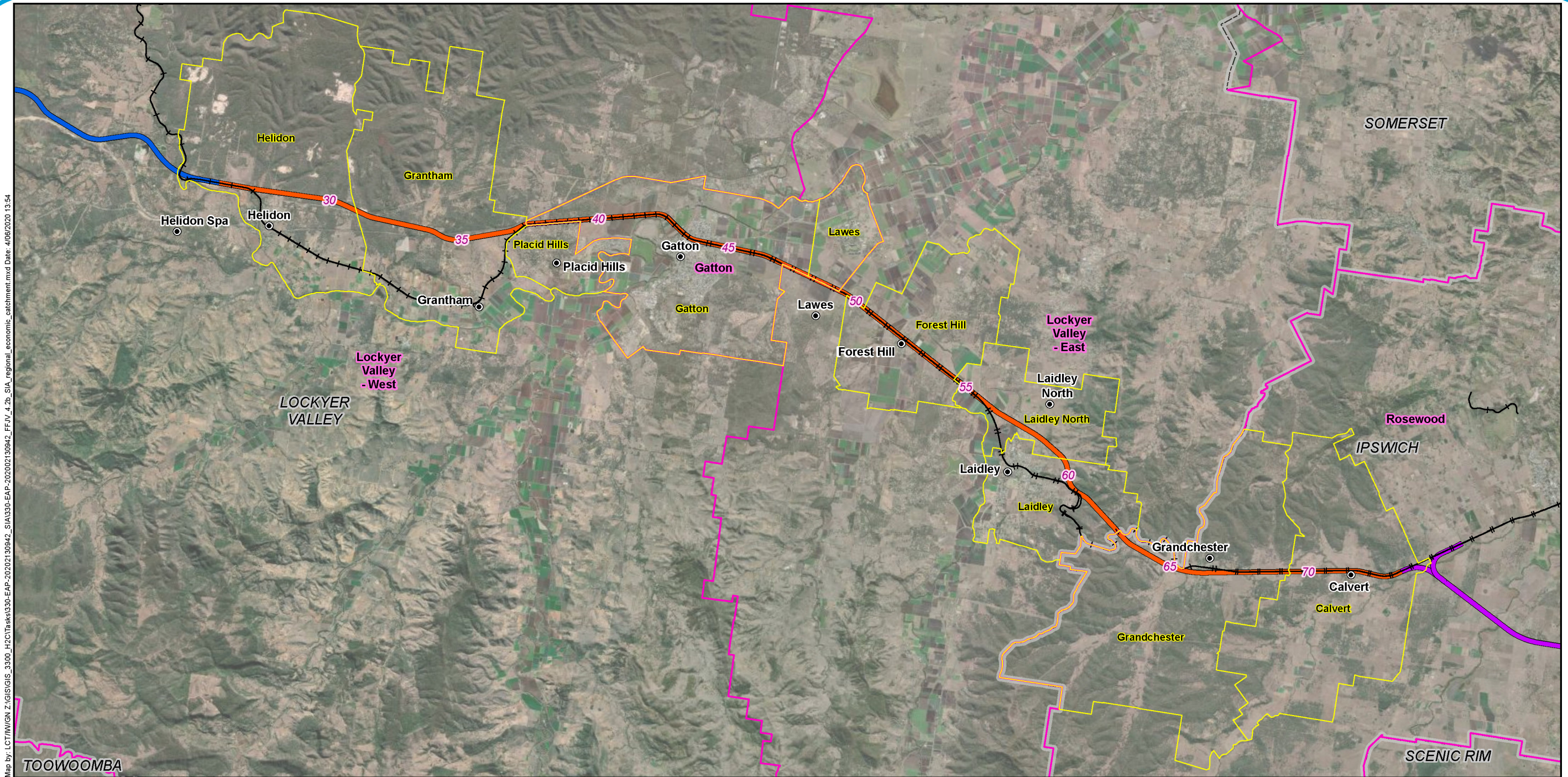


A3 scale: 1:820,000



**Helidon to Calvert**  
**Figure 4.2a: SIA study area and regional economic catchment**

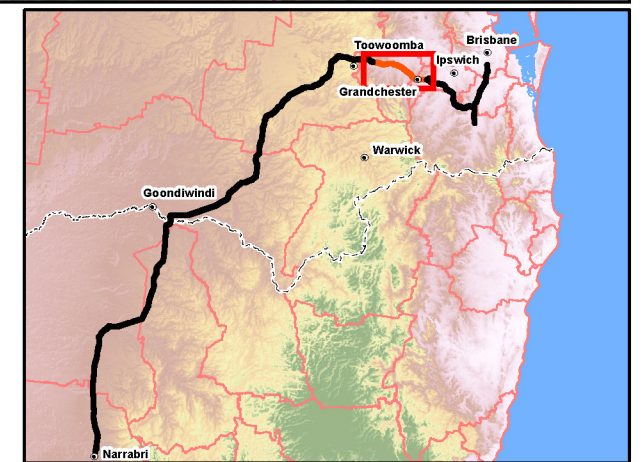




Map by: LCT/IGN Z:\GIS\GIS\_3300\_H2C\Tasks\330-EAP-2020\2130942\_SIA\330-EAP-2020\2130942\_FF\_IV\_4\_2b\_SIA\_regional\_economic\_catchment.mxd Date: 4/06/2020 13:54

**Legend**

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



A3 scale: 1:150,000  
0 1 2 3 4 5km

**Helidon to Calvert**  
**Figure 4.2b: SIA study area and regional economic catchment**



#### 4.2.4 Statistical geography

The SIA study area’s statistical geography is shown in Table 4-2. State Suburb Codes (SSCs) as defined by the ABS have been used to delineate potentially impacted communities, as they include not just urban localities but the rural and rural residential areas around them.

Where specific data are not available for State suburbs, they have been provided for the relevant Statistical Area 2 (SA2) areas. Data are provided for the two LGAs, and some labour force data have also been provided for the broader labour force region which includes the Toowoomba and Ipswich Valley SA4s.

Of note, the Lawes SSC includes the University of Queensland’s (UQ) Gatton campus, which accounts for the variability in this suburb’s statistics compared to other areas.

**Table 4-2 Statistical geography**

Area	Study Area	Name	Population 2016	Land area (km <sup>2</sup> )
<b>Statistical Area 1 (SA1)</b>	EIS investigation corridor	SA1s as show in Figure 5-1	Refer Section 5.2	867.9
<b>State Suburbs (SSC)</b>	Potentially impacted communities	Helidon	1,061	48.74
		Helidon Spa	541	13.7
		Grantham	637	49.28
		Gatton	7,102	42.85
		Placid Hills	832	7.40
		Lawes	329	7.13
		Forest Hill	968	26.75
		Laidley North	408	15.34
		Laidley	3,803	17.49
		Grandchester	445	57.38
		Calvert	310	44.18
<b>Statistical Area 2 (SA2)</b>		Lockyer Valley – West (Helidon and Grantham)	11,362	1,480.2
		Lockyer Valley – East (Forest Hill and Laidley)	19,814	741.6
		Gatton (Gatton)	7,434	50.0
		Rosewood (Grandchester and Calvert)	11,806	674.6
<b>LGA</b>	SIA study area	Ipswich	38,609	1,085
		Lockyer Valley	197,737	2,272
<b>Statistical Area 4 (SA4)</b>	Broader labour force region	Toowoomba	149,512	6,681
		Ipswich	323,069	6681
<b>Queensland (State)</b>	Comparator for SIA study area	Queensland	4,703,193	185.3 million

Source: ABS Census of Population and Housing, 2016

Note: km<sup>2</sup> = square kilometres

### 4.3 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 community concerns
- Desktop analysis of social infrastructure provision and management in the area of social influence
- Identification of Council departments and Government agencies with an interest in the SIA study area.

This section provides a profile of SIA stakeholders and the key issues they identified.

#### 4.3.1 Stakeholder profile

Stakeholder inputs to the scope of assessment were obtained through:

- Discussions with community members in community information sessions
- SIA community survey (refer Section 4.3.2)
- SIA team participation in the Lockyer Valley CCC October 2018 meeting, and feedback from ARTC’s presentation to the CCC on social performance strategies (March 2019)
- Consultation with LVRC and ICC
- A community meeting organised by the Lockyer Valley Tourism Association.

Table 4-3 provides a stakeholder profile including stakeholder groups, their locations, and key issues to be considered in the SIA.

**Table 4-3 Stakeholder profile**

Stakeholder Groups	Locations	Key issues for investigation
<b>Landowners in EIS investigation corridor</b>	<ul style="list-style-type: none"> <li>■ Helidon</li> <li>■ Helidon Spa</li> <li>■ Grantham</li> <li>■ Placid Hills</li> <li>■ Gatton</li> <li>■ Lawes</li> <li>■ Forest Hill</li> </ul>	<ul style="list-style-type: none"> <li>■ Acquisition of properties resulting in displacement of households</li> <li>■ Impacts of property severance on property use and access for farms and grazing properties</li> <li>■ Noise, vibration, visual and connectivity impacts</li> <li>■ Potential for decrease in land values</li> <li>■ Potential for diversion of water flows to affect flooding patterns</li> </ul>
<b>Landowners near EIS investigation corridor</b>	<ul style="list-style-type: none"> <li>■ Little Liverpool Range</li> <li>■ Laidley and Laidley North</li> <li>■ Grandchester</li> <li>■ Calvert</li> </ul>	<ul style="list-style-type: none"> <li>■ Noise, vibration, dust and visual and connectivity impacts on amenity</li> <li>■ Potential for visual amenity to be adversely impacted by the railway line</li> <li>■ Potential for homes to be affected by rail noise</li> <li>■ Potential for flooding patterns to affect farms, homes or environmental values</li> <li>■ Traffic network connectivity</li> <li>■ Loss of small farms</li> </ul>



Stakeholder Groups	Locations	Key issues for investigation
<b>Lockyer Valley Regional Council</b>	<ul style="list-style-type: none"> <li>■ Helidon</li> <li>■ Helidon Spa</li> <li>■ Grantham</li> <li>■ Placid Hills</li> <li>■ Gatton</li> <li>■ Lawes</li> <li>■ Forest Hill</li> <li>■ Little Liverpool Range</li> <li>■ Laidley and Laidley North</li> </ul>	<ul style="list-style-type: none"> <li>■ Impacts on vehicular connections which are important for local access to services, and to tourism assets</li> <li>■ Biosecurity concerns through the accidental transfer of pests and diseases</li> <li>■ Potential for build-up of debris against rail line during and after flooding events, with potential to increase flooding impacts</li> <li>■ Concern for community safety at level crossings</li> <li>■ Need to maintain access to affordable housing for UQ students living in Gatton</li> <li>■ Need for local employment opportunities and on-the-job training</li> <li>■ Potential impacts on tourism values through effects on visual amenity or connectivity</li> <li>■ Maintaining social amenity i.e. community members' enjoyment of local towns</li> <li>■ Potential for disrupted traffic as a result of Warrego Highway crossing construction</li> <li>■ Community concern regarding effects on property values</li> <li>■ Concern for loss of parkland</li> </ul>
<b>Ipswich City Council</b>	<ul style="list-style-type: none"> <li>■ Calvert</li> <li>■ Grandchester</li> <li>■ Ipswich</li> </ul>	<ul style="list-style-type: none"> <li>■ Grandchester is a vulnerable community following flooding impacts and due to socio-economic factors, and has a low population mass</li> <li>■ Potential for severance of connectivity between facilities and homes due to intensification of existing corridor</li> <li>■ Grandchester school will be very close to the Project and the rail separates the school from the main part of town</li> <li>■ Concerns for pedestrian and vehicular connectivity, impacts on amenity from noise and potentially vibration in Grandchester</li> <li>■ Potential noise impacts on Calvert which is a flat area where noise will travel</li> <li>■ Avoid creating new residential lots through property severance</li> <li>■ Impacts of property severance on farmers</li> <li>■ Opportunity for Indigenous business development</li> <li>■ Potential to impact on access, scenic views or amenity of tourism attractions</li> <li>■ Effects of disruption to local roads and services, particularly in relation to delays due to level crossings</li> <li>■ Community concern regarding the Project's effect on property values</li> <li>■ Need for comprehensive and inclusive consultation with community members</li> </ul>
<b>Traditional owners</b>	<ul style="list-style-type: none"> <li>■ SIA study area</li> </ul>	<ul style="list-style-type: none"> <li>■ Impact on Native Title interests</li> <li>■ Awareness of cultural heritage and cultural values</li> </ul>

Stakeholder Groups	Locations	Key issues for investigation
<b>Community members and businesses</b>		<ul style="list-style-type: none"> <li>■ Opportunity for Indigenous businesses to participate in the project</li> <li>■ Opportunities for Indigenous employment and training</li> </ul>
	<ul style="list-style-type: none"> <li>■ Helidon</li> </ul>	<ul style="list-style-type: none"> <li>■ Project planning has caused a lot of anxiety and uncertainty</li> <li>■ Proximity of rail line would make nearby houses uninhabitable</li> <li>■ Impact to quality of life due to noise and lack of enjoyment of property</li> <li>■ Concerns regarding market value of homes near rail line</li> </ul>
	<ul style="list-style-type: none"> <li>■ Grantham/Placid Hills</li> </ul>	<ul style="list-style-type: none"> <li>■ Expectation that freight rail noise and vibration will affect residential amenity in Grantham</li> <li>■ Loss of lifestyle incorporating outdoor living and bushland</li> <li>■ Stress affecting people already traumatised by past flooding events</li> <li>■ This area is sandstone which carries vibration a greater distance</li> <li>■ Intensification of rail corridor on boundary of rural residential properties in Placid Hills which will affect visual amenity and noise levels</li> </ul>
	<ul style="list-style-type: none"> <li>■ Gatton</li> </ul>	<ul style="list-style-type: none"> <li>■ Concern that the railway line will divide the community</li> <li>■ Impact on the market value of properties if amenity is affected by rail noise</li> <li>■ Potential for businesses to be negatively impacted due to changes to accessibility and convenience</li> <li>■ Freight noise and vibration affecting homes close to rail line</li> <li>■ Effects of rail noise and interruptions to connectivity across town</li> <li>■ Noise and flashing lights associated with level crossings</li> <li>■ Rail crossings causing connectivity issues and back up of nearby roads leading to safety risks, traffic concerns and inconvenience</li> <li>■ Effects of noise and vibration on churches</li> <li>■ Concern regarding safety of level crossings</li> <li>■ Disruption of access to Gatton Showground</li> <li>■ Opportunity for local quarries to supply Project</li> </ul>
<ul style="list-style-type: none"> <li>■ Forest Hill</li> </ul>	<ul style="list-style-type: none"> <li>■ Concern for exacerbation of flooding</li> <li>■ Concern about access and connectivity across town, including pedestrian access</li> <li>■ Concerns for the safety of people with disability e.g. mobility scooters crossing rail lines</li> <li>■ Effects on the scenery of historic town and surrounds</li> <li>■ Effects on freight rail noise, vibration, dust on residential and business amenity</li> </ul>	

Stakeholder Groups	Locations	Key issues for investigation
	<ul style="list-style-type: none"> <li>■ Laidley</li> </ul>	<ul style="list-style-type: none"> <li>■ Potential for noise and vibration to affect residences, retirement villages, or schools</li> <li>■ Concern regarding effects on tourism events</li> <li>■ Concern for loss of biodiversity and animal habitat</li> <li>■ Air pollution with potential to affect tank water</li> <li>■ Stress affecting communities whose resilience has been affected by past flooding</li> <li>■ Severed residential access at Paroz Road increasing travel time to Laidley from five minutes to 30 minutes</li> <li>■ Property severance and loss of enjoyment of property due to noise traveling up the ridge</li> <li>■ Visual amenity impacts, and the effect this will have on property values</li> <li>■ Concern about air quality and amenity impacts resulting from the ventilation facility</li> </ul>
	<ul style="list-style-type: none"> <li>■ Calvert</li> </ul>	<ul style="list-style-type: none"> <li>■ Concern that the increase in rail noise will affect the amenity of the town, with potential for noise to carry at distances across rural properties</li> <li>■ Intensification of the corridor and its use affecting the rural landscape</li> <li>■ Homes are located within 100 m of the rail line and could experience an increase in noise, dust and vibration</li> <li>■ Severance of crossings across the rail corridor</li> <li>■ Potential to impact on ability to sell properties</li> <li>■ Concerns about exacerbation of flooding</li> </ul>
<p><b>Tourism stakeholders</b></p>	<ul style="list-style-type: none"> <li>■ Lockyer Valley</li> </ul>	<ul style="list-style-type: none"> <li>■ Construction impacts causing traffic delays and impacts on visual amenity of Lockyer Valley and rural Ipswich areas</li> <li>■ Visual amenity impacts of rail line on scenic amenity and therefore tourism assets and experiences</li> <li>■ Potential for traffic delays at level crossings</li> <li>■ Concern that rail noise will affect the amenity of tourism properties</li> </ul>
<p><b>Community and Government organisations – education, community support, health</b></p>	<ul style="list-style-type: none"> <li>■ Lockyer Valley LGA</li> <li>■ Ipswich LGA</li> </ul>	<ul style="list-style-type: none"> <li>■ Concern about the Project's proximity to Grandchester School. and pedestrian and bike access on Mount Mort Road</li> <li>■ Emergency service access through town when trains are passing</li> <li>■ Implications of Project-related stress, anxiety and disruption for mental health</li> <li>■ Limited resources in rural hospitals to cope with increased demand</li> <li>■ Concern about UQ student safety and housing access</li> <li>■ Existing mental health issues following the impacts of the past floods</li> <li>■ Impact on land values due to Project uncertainty is causing anxiety now</li> </ul>

Stakeholder Groups	Locations	Key issues for investigation
		<ul style="list-style-type: none"> <li>■ Churches will be impacted by noise from construction and rail operation</li> <li>■ Maintenance of pedestrian accessibility to churches</li> <li>■ Potential to exacerbate existing traffic bottleneck at the Gatton Hospital</li> <li>■ Access to Bowls Club may be affected by Gaul Street crossing</li> <li>■ Uncertainty about local employment opportunities</li> <li>■ Project represents opportunity for employment and community development initiatives</li> <li>■ Older people and asthmatics may be vulnerable during the Project's construction phase</li> </ul>
<p><b>Police and emergency services</b></p>	<ul style="list-style-type: none"> <li>■ Lockyer Valley LGA</li> <li>■ Ipswich LGA</li> </ul>	<ul style="list-style-type: none"> <li>■ Wait times for emergency services vehicles at level crossings</li> <li>■ Benefits for businesses with potential to engage with the Project</li> <li>■ Need to maintain access for Queensland Fire and Emergency Services (QFES) around the EIS investigation corridor and to nearby communities which includes areas on hills, ridges and plains</li> <li>■ Need for close cooperation with QFES and QPS prior to construction to mitigate impacts on community safety and demands for service</li> <li>■ Community anger and anxiety about land acquisition</li> <li>■ Potential for protest activity which will be a police resourcing issue</li> <li>■ Cunningham Highway is an existing focus for traffic policing and road closures can cause safety issues</li> <li>■ Even with small increases in traffic an increase in fatigue related incidents/animal strike is noticed</li> <li>■ Potential for increased calls for service and resources required for Wide load escort</li> </ul>

**4.3.2 Community survey**

A community survey was undertaken to identify community views about community values and potential Project impacts and benefits (refer Section 6.3.1). A total of 59 respondents from the Lockyer Valley LGA, 64 respondents from the Ipswich LGA and another 77 people from communities on the border of the Ipswich/Scenic Rim LGAs provided input about how they expected Inland Rail would affect local people, businesses and communities, by rating their response to a series of value statements.

Survey participants indicated that they expected the Project to cause negative impacts on social conditions. Figure 4-3 presents the average scores for survey responses (using a scale of 1 = strong negative effect, 2 = some negative effect, 3 = no effect, 4 =some positive effect, and 5 = strong positive effect).

Lowest scores were provided in relation to housing and property use (scoring 1.5 or below), and the amenity of towns or farms, community wellbeing and lifestyle factors (all scoring 1.6 or below). Response ratings with an average of 2 or more were found in relation to employment and training options (2.2 for Lockyer Valley LGA and 2.1 for the Ipswich LGA,) and industry and economic development (2 for Lockyer Valley LGA) however these ratings still rank at the negative end of the response spectrum as shown in Figure 4-3.

Survey inputs to the SIA scope indicate that community members have strong concerns about impacts on homes, farms, businesses and the character of local communities. The survey also indicated that there is low confidence in the Project’s potential for positive effects on social conditions.

Representative comments from participants which indicate why they expect negative impacts included:

- “Businesses in earshot of the train line will find it difficult to operate as all conversations will need to cease for the duration of the passing of the train”
- “Proposed sound barriers will destroy the visual amenity of the district”
- “Any benefits to local businesses during construction will be of limited duration, while there is no benefit once operation commences”
- “Introducing fine dust particles and noise to the quiet environment will affect health and wellbeing”
- “Visual impacts will detract from the environment, and impact on land values”
- “The Project is already causing anxiety”
- “We moved away to get away from rail and cars, and now we’ll have one in the backyard”
- “Potential for impacts to quality of sleep and sleep disturbance”.

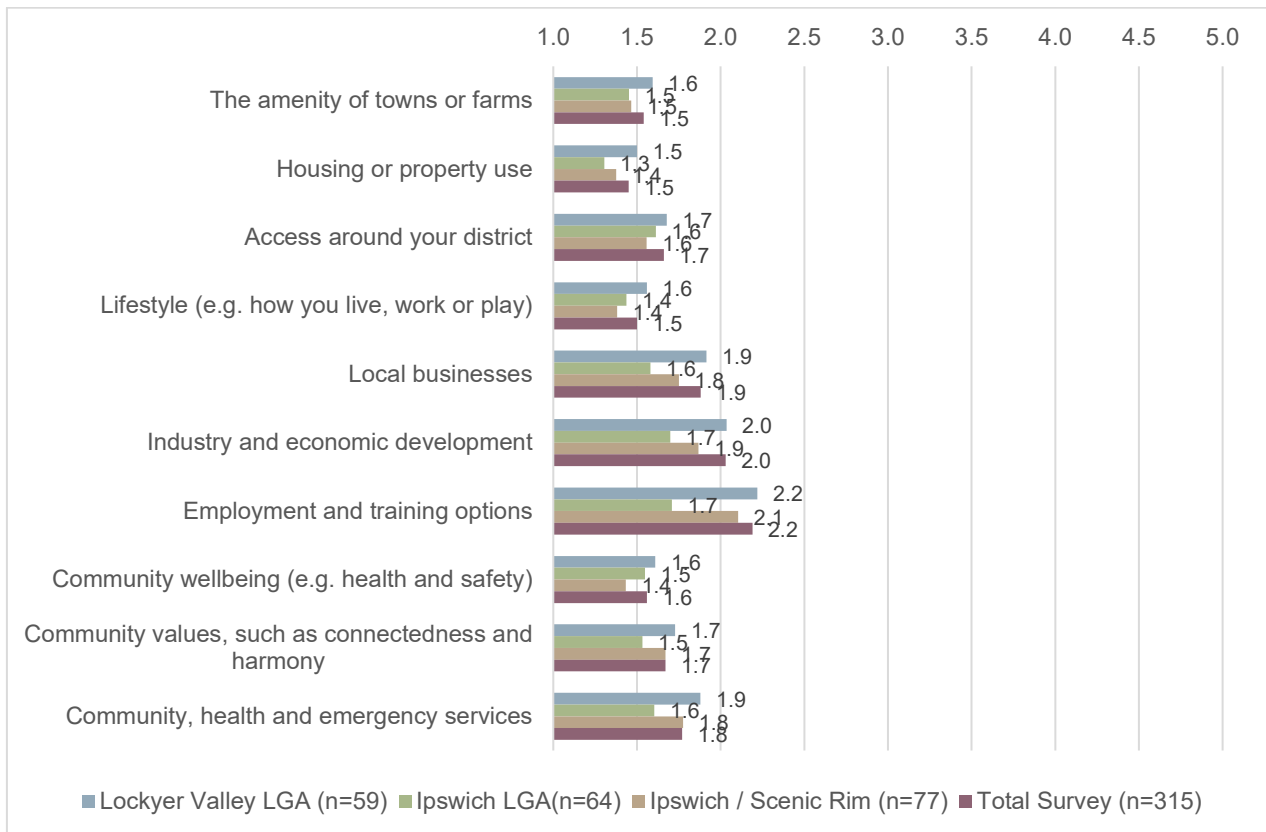


Figure 4-3 Survey participants' views on social impacts and benefits

#### 4.4 Scope of potential impacts

The scope of the SIA was defined by considering:

- ToR requirements and the SIA Guideline
- 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.

The SIA has sought to address the statutory requirements as provided by the ToR and the SIA Guideline (discussed in Sections 2.2 and 2.3). The ToR central requirement for the SIA is to assess and describe 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 assessment of cumulative impacts. The SIA is also required to integrate the relevant results of other EIS technical reports 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 the SIMP (refer Section 8).

Potential impacts and benefits to be assessed are summarised in Table 4-4.

**Table 4-4 Potential social impacts and benefits**

Potential impacts/benefits	Section
<b>Community values</b>	
Impacts on Indigenous cultural values or native title	7.1.1
Effects of land acquisition on individuals, families and communities	7.1.2, 7.1.8, 7.1.9
Effects of construction noise on amenity and community health	7.1.3 and 7.4.5
Potential to exacerbate social disadvantage	7.1.9
Dust generation from construction and operation	7.1.3 and 7.1.4
Effects on the character and amenity of local towns	7.1.5 and 7.1.7
Changes to the amenity of rural residential areas	7.1.6
Effects on community identity	7.1.7
Loss of community cohesion	7.1.8
Impacts on connectivity near the EIS investigation corridor and local communities	7.1.10
<b>Employment</b>	
Potential for employment during Project construction	7.2.1
Potential for employment during Project operation	7.2.1
Benefits of Project training and development	7.2.3
Impacts on employment in other industries	7.2.4
Potential for workforce behaviour to impact on community values	7.2.5
<b>Housing and accommodation</b>	
<b>Potential to change the settlement pattern of communities or the SIA study area</b>	<b>7.3.1</b>
Population change leading to housing demands	7.3.2
Potential for decrease in property values	7.3.3
Potential to affect housing or accommodation supply and affordability	7.3.4

Potential impacts/benefits	Section
Impacts on short-term accommodation	7.3.5
Impacts on seasonal workers' accommodation	7.3.6, 7.3.7
<b>Community health and wellbeing</b>	
Impacts on community facilities' amenity or access	7.4.1
Impacts on health and community support services	7.4.2
Impacts on police and emergency services	7.4.3
Impacts on recreational facilities	7.4.4
Changes to the environmental conditions which could affect human health	7.4.5
Stress and anxiety due to the acquisition process or concern about Project impacts	7.4.6
The risk of suicide	7.4.7
Community safety, including traffic safety	7.4.8
<b>Business and industry</b>	
Impacts on farms and agribusinesses	7.5.1
Impacts on businesses within towns	7.5.2
Labour draw from other businesses	7.5.3
Impacts on tourism	7.5.4
Potential for local and regional business to benefit during operations	7.5.5
Facilitation of regional economic development	7.5.6

## 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 Native title

The EIS investigation corridor is located on land within the Yuggera Ugarapul People's Native Title claim area which has been accepted for registration and is yet to be determined by the Native Title Tribunal.

Land within the EIS investigation corridor is predominately held as freehold or is within the existing West Moreton System rail corridor or the Gowrie to Grandchester future State transport corridor, where Native Title rights have been extinguished. Land which is held under other forms of tenure including State or Crown land may be subject to Native Title.

#### 5.1.2 Regional communities

##### Lockyer Valley Local Government Area

The Lockyer Valley LGA covers an area of 2,200 km<sup>2</sup> and was formed through the amalgamation of the Gatton and Laidley Shire Councils in 2008. The LGA is located on the Warrego Highway one hour west of Brisbane and 20 minutes east of Toowoomba. It is surrounded by Southern Downs LGA to the south, Somerset LGA to the north Toowoomba LGA to the west and Ipswich City and Scenic Rim LGAs to the east. In 2016, the Lockyer Valley GA had a population of 38,609 people.

Pastoralists settled the area in the 1820s and in the 1870's German and Prussian settlers arrived and brought their farming skills to the region. In 1866 the rail line from Ipswich (en route to Toowoomba) reached Gatton. The region's agricultural college has been open since 1897. (Centre for the Government of Queensland, 2018). Irrigation enterprises flourished in the 1930s with the introduction of reticulated electricity. Agriculture, forestry, farming, transport and small business are still the main avenues of employment. Regional farm work attracts backpacker, refugee and migrant labourers giving the region a fluctuating cultural profile.

The 2011 flood affected the region deeply with the loss of life, homes and businesses throughout the valley. Some 2,300 houses within the region were inundated and 1,100 km of 1,400 km council-owned roads were damaged.

Gatton is the commercial centre of the region, with other towns including Laidley, Grantham and Helidon, and townships and villages including Withcott, Murphys Creek, Plainland and Forest Hill. The region's deep alluvial soil, climate and good quality water has earned the nickname "Australia's salad bowl" as it represents 12 – 14 per cent of Queensland's agricultural economy (Lockyer Valley Growers, 2018).

The crops grown in the region include carrots, potatoes, cabbage, broccoli, cauliflower, pumpkins, corns and beans as well as some exotic vegetables. The region's population is predicted to grow steadily (refer Section 5.2.4) and the LVRC recognises the challenge of supporting this growth and residential pressure (Lockyer Valley Regional Council, 2017). The valley is dissected by creeks that enter the Brisbane River near the village of Lowood.



## **Ipswich LGA**

Ipswich City is located on the Bremer River and is Queensland's oldest provincial city. The LGA covers some 1,085 km<sup>2</sup> and is surrounded by the LGAs of Brisbane to the east, Lockyer Valley to the west, Scenic Rim and Logan to the south, and Somerset to the north. In 2016, Ipswich LGA was home to 193,733 people.

The LGA is characterised by the Bremer River and its tributaries, the historic town centre and diverse suburban and semi-rural areas.

The local economy was developed through manufacturing, agriculture, coal mining and railway infrastructure and servicing. Agricultural production is located adjacent to the river and creek floodplains, some mining/extractive uses still exist, and industrial uses are prevalent in the former mining areas. Currently key industry sectors include energy generation, food and agribusiness, defence, advanced manufacturing and transport and logistics. (Ipswich City, 2018a). Ipswich LGA also has significant strengths in education, training and health services.

### **5.1.3 Potentially impacted communities**

#### **Helidon**

Helidon is located approximately 20 km east of Toowoomba within the West Moreton System rail corridor. Helidon is bounded by Lockyer Creek to the south and west, and by Lockyer National Park and State Forest to the north and is dissected by the Warrego Highway. Helidon was settled in the 1870's, has an artesian water spa and is known for export quality sandstone used in Queensland's historic buildings and cemetery monuments. (Lockyer Valley Regional Council, 2017).

The Gatton Shire Planning Scheme (Gatton Shire Council, 2007) designates the area as a rural agricultural zone adjoining creek lines, rural general, industrial and community facilities, rural and urban residential with a defined commercial zone. Areas to the south of the rail line are earmarked for urban residential land supply in 2-10 years. The predominant land uses are grazing native vegetation and conservation and natural environments, with some residential, mining and industrial areas.

The Helidon locality to the east of the town centre is primarily used for grazing and agricultural production, with some irrigated seasonal agriculture. The SEQ Regional Plan, also known as ShapingSEQ, designates this area as regional landscape and rural production. The floodplains of Lockyer and Sandy Creeks are designated as important agricultural areas under the state planning policy and regional interests (State of Queensland, 2018).

#### **Helidon Spa**

Helidon Spa is a locality adjacent to the township of Helidon, bounded by Lockyer Creek and Monkey Water Holes Creek, and dissected by the Warrego Highway. The area is described as regional landscape and rural production and rural living areas under ShapingSEQ (State of Queensland, 2018). Predominant land uses of grazing native vegetation and residential and natural environments with limited irrigated cropping and land in transition and limited industrial areas (State of Queensland, 2018). Areas to the south of Lockyer Creek are earmarked for rural residential land supply in 5 to 10 years.

### **Grantham**

Grantham is located approximately 30 km east of Toowoomba in the Lockyer Valley, and is surrounded by premier agricultural land, with Grantham as one of the largest producers of vegetables in Australia. Grantham is bounded by Nunns Road to the west and Philips Road to the east. Lockyer Creek is the southern boundary with Lockyer State Forest to the north. The West Moreton System rail corridor and Warrego Highway dissect the area. The Grantham area is entirely designated as regional landscape and rural production area under ShapingSEQ (State of Queensland, 2018). The predominant land uses are grazing native vegetation, modified grazing, irrigated seasonal agriculture and horticulture in the Lockyer Creek floodplain and rural residential (State of Queensland, 2018).

Grantham was named after a pastoral run in 1842. A rail siding was established in the West Moreton rail corridor through this area in 1867, and Grantham became central to Lockyer Valley's dairy industry with the Grantham Butter factory operating from 1907 to 1971 (Talbot, 2013). The Gatton bypass constructed in 1989 saw the diversion of Toowoomba-Ipswich traffic from the township of Grantham. In 2011, devastating floods resulted in death and property losses and the subsequent rebuilding of the residential areas on higher ground (Queensland Reconstruction Authority, 2013).

### **Placid Hills**

Placid Hills is a locality approximately 5 km east of the township of Gatton. It is bounded by Lockyer Creek to the south and the West Moreton System rail corridor to the north and is dissected by Old Toowoomba Road. The area has been designated as rural living within the urban footprint, and within the agricultural use areas it is designated as regional landscape and rural production under ShapingSEQ (State of Queensland, 2018). The land use is predominantly rural residential with the floodplains of Lockyer Creek supporting irrigated agriculture and some areas of grazing native vegetation (State of Queensland, 2018).

The alignment is adjacent to rural residential properties between Ch 37.0 km and Ch 41.0 km with homes and water dams within approximately 200 m of the EIS investigation corridor.

### **Gatton**

Gatton is the administrative centre of the Lockyer Valley LGA and is located approximately 37 km east of Toowoomba. Gatton is bounded by Lockyer Creek to the west and the Warrego highway to the north and is dissected by the West Moreton System rail corridor.

Gatton was founded in 1855 and remained a small village until the rail connection to Grandchester opened in 1866. The township has defined commercial and residential precincts, with grazing native vegetation and irrigated agriculture uses dominating the outer margins of the township (State of Queensland, 2018). The area is known as the salad bowl of the valley with intensive agriculture surrounding the township. Gatton is also the home community for the Gatton Agricultural College (UQ Gatton Campus) which opened in 1897 and is located 5 km east of the township in the localities of Lawes and College View.

To the east of the Gatton township, the existing West Moreton System rail corridor is used mainly for grazing native vegetation. Within the Gatton township, the predominant land use is for commercial services. West of Gatton irrigated seasonal horticulture and grazing native vegetation are the predominant land uses (State of Queensland, 2018).

## **Lawes**

Lawes is located approximately 5 km east of Gatton and hosts the UQ Gatton Campus. The locality was named in 1935 together with the Lawes railway station, which was formerly known as the College Siding that serviced the Queensland Agricultural College. The station formed part of the West Moreton System rail corridor and has since been demolished. The area within the existing West Moreton System rail corridor is used predominantly as grazing native vegetation at Lawes, whilst areas outside of this corridor consist of grazing land and irrigated seasonal horticulture (State of Queensland, 2018).

The UQ Gatton Campus was first established in 1897 at Gatton as the Queensland Agricultural College which amalgamated with UQ in 1990. The Gatton Campus is located on the Warrego Highway, approximately 5 km east of Gatton. Entry to the campus grounds features the heritage-listed main campus building, located on a sandstone ridge above the Lockyer Creek floodplain. The campus includes central administrative, teaching and residential facilities surrounded by farm paddocks (UQ, 2018).

UQ Gatton's farms cover 1,068 hectares and includes a dairy, piggery, sheep and goat herd, horticultural fields, post-harvest facilities and greenhouses, and an extensive range of plant and farm machinery. The farms are spread across two locations, including a main area of activity on campus and Darbalara Farm which comprises 184 ha and is located 10 km south east of the main campus. Darbalara is the home of the School of Veterinary Science Droughtmaster herd and beef cattle teaching facility, as well as other grazing and crop production (UQ, 2018).

The Halls of Residence at UQ Gatton, comprises 436 rooms and was established in 1897. UQ Gatton Campus also offers short stay accommodation for visitors and conference groups at the motel and cottage, and the Halls of Residence during non-teaching periods (UQ, 2018).

The UQ St Lucia and Gatton campuses are linked by an express bus service which runs five times a day eastbound and four times a day westbound, Monday to Friday during semester.

A rail-bus service also runs between Brisbane and Gatton, providing a Greyhound bus connection from Rosewood train station to the centre of the Gatton campus (UQ, 2018).

## **Forest Hill**

The Forest Hill township is located 83 km west of Brisbane and 53 km east of Toowoomba in the Lockyer Valley. Forest Hill is bounded by Laidley Creek to the east and is dissected by the West Moreton System rail corridor and Sandy Creek. Forest Hill is a picturesque rural village and part of the Cobb & Co tourist route, 5 km south of the Warrego Highway to the west of Laidley. The existing West Moreton System rail corridor runs through the centre of the town.

The township is designated as urban footprint and the surrounds as regional landscape and rural production in ShapingSEQ. The surrounding area is rural agricultural land and rural landscape, including irrigated agriculture and grazing native pasture (State of Queensland, 2018).

## **Laidley and Laidley North**

The township of Laidley is located 83 km west of Brisbane and is the easternmost town of the Lockyer Valley LGA. The localities of Laidley and Laidley north are bounded by Laidley Creek to the west and dissected by the West Moreton System rail corridor. The township is designated as urban footprint and the surrounds as regional landscape and rural production under ShapingSEQ. Areas to the north-east and south of the existing township are earmarked for urban residential development over the next 10 years. Land use around the flood plain of Laidley Creek is irrigated agriculture, within the township the land use is predominantly residential and services. There are some limited areas of mining/quarrying, manufacturing and land in transition (State of Queensland, 2018). At Laidley North, the area contains land uses mapped as irrigated seasonal horticulture and grazing land (State of Queensland, 2018).

## Grandchester

The township of Grandchester is located 76 km west of Brisbane on the westernmost boundary of Ipswich LGA. The locality is dissected by the Little Liverpool Range, Western Creek and the West Moreton System rail corridor. The entire locality is designated as regional landscape and rural production under ShapingSEQ. Land use is predominantly grazing native vegetation where it falls within the West Moreton System rail corridor. Outside of the West Moreton System rail corridor, land use is residential and community services where within the Grandchester township, and residual native cover where the Project exits the proposed eastern tunnel portal (State of Queensland, 2018)

The first rail line in Queensland from Ipswich to Bigges Camp was opened 31 July 1865. Bigges Camp was renamed Grandchester in August 1865. The Rail station was a transfer point from rail to Cobb & Co coach to Toowoomba (Queensland Rail, 2015).

## Calvert

The town of Calvert is located in the City of Ipswich approximately 3 km south-west of the EIS investigation corridor. The township is dissected by the West Moreton System rail corridor, Hidden Vale Road, Franklin Vale Creek and Western Creek. Calvert is 26 km south-east of Gatton and 25 km south-west of Ipswich City centre. The EIS investigation corridor is within zones mapped as regional landscape and rural production area under ShapingSEQ (State of Queensland, 2018).

The primary land use for the 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 City Plan 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.

The area west of the township of Calvert is designated as regional landscape and rural production area under ShapingSEQ (State of Queensland, 2018) and the land use is grazing native pasture.

### 5.1.4 Other projects in the Project region

The Project adjoins the Inland Rail G2H project in the west and the Inland Rail C2K project in the east. An additional two Inland Rail projects being NSW/Qld Border to Gowrie (B2G) and Kagaru to Acacia Ridge and Bromelton (K2ARB) are proposed within Queensland. Inland Rail projects are shown in Figure 4-1a.

Cumulative impacts may occur for communities in the Ipswich and Lockyer Valley LGAs as the result of the construction and operation of the combined Inland Rail projects, and/or as a result of the construction or operation of the following projects (refer to EIS Chapter 22: Cumulative impacts for map of the projects considered):

- Bromelton SDA
- RAAF Base Amberley future works
- Ipswich Motorway Upgrade Rocklea to Darra (Remaining sections)
- GWIZ
- Remondis Waste to Energy Facility
- InterlinkSQ.

There is also potential for cumulative labour demands for other rail projects in SEQ to affect the availability of labour or skills, including Cross River Rail, Brisbane Metro and Gold Coast Light Rail Stage 3A. Further details regarding projects which may contribute to cumulative impacts are provided in Section 7.6.

## 5.2 Community profile

This section provides an overview of demographic characteristics in the EIS investigation corridor, potentially impacted communities and the SIA study area.

### 5.2.1 EIS investigation corridor

Key characteristics of the SA1s within the EIS investigation corridor are shown in Table 5-1, including population change and density, dwelling numbers and Socio-Economic Indices for Areas (SEIFA) scores. The SEIFA indices summarise 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 indices are also clustered into deciles and ranked so that relativity with other areas can be understood, with lower decile rankings indicating a higher potential for disadvantage. Two indices have been used here to provide an indication of social resources in the SIA study area:

- Index of Relative Socio-Economic Advantage and Disadvantage (IRSAD) Index which summarises factors including income, percentage of people in low skilled occupations, unemployment, housing expenditure and occupied dwellings with no cars or requiring extra bedrooms
- Index of Education and Occupation (IEO) which summarises factors such as levels of qualification achieved, participation in further education and the skills levels for occupations.

The SA1s represent a total area of 473.15 km<sup>2</sup>, within which there were approximately 5,873 dwellings and a population of 14,632 people in 2016 (an increase of 1,505 people or 8.3 per cent since 2011).

Figure 5-1 shows the Project in the context of the 37 Statistical Areas Level 1 (SA1s) it traverses, including the deciles (10 per cent increments) within which their SEIFA scores fall. Population density was highest in:

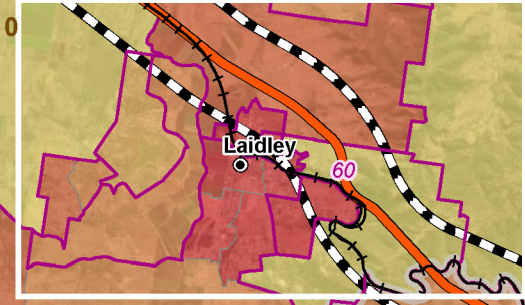
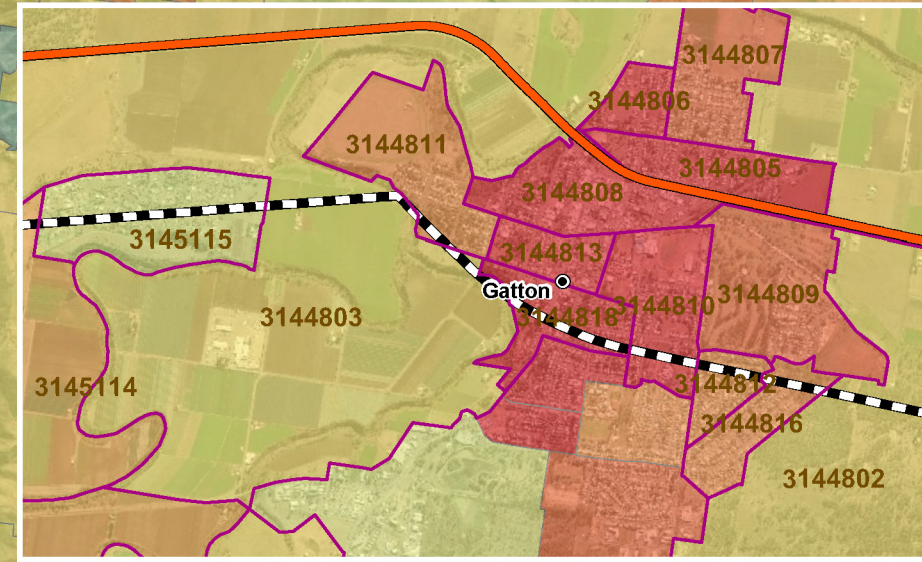
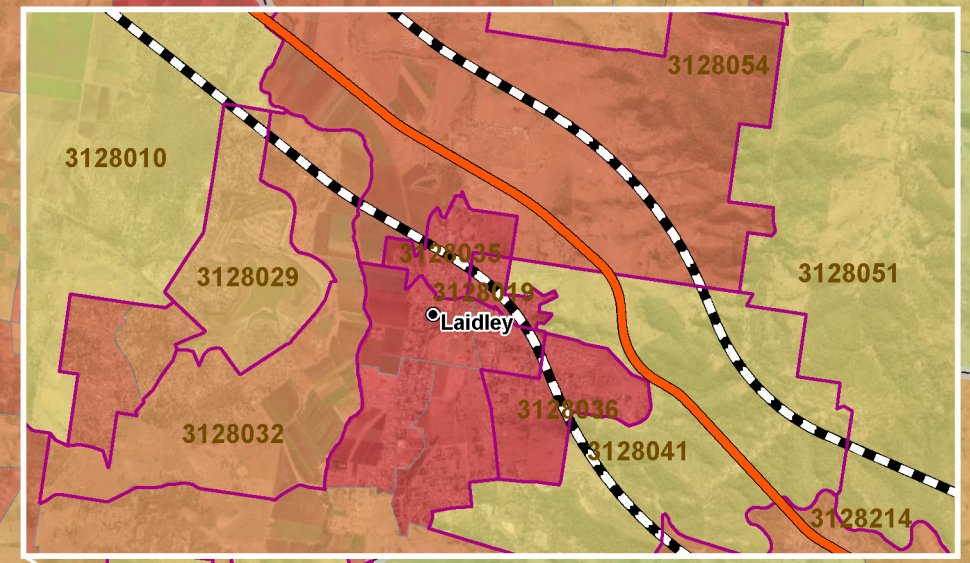
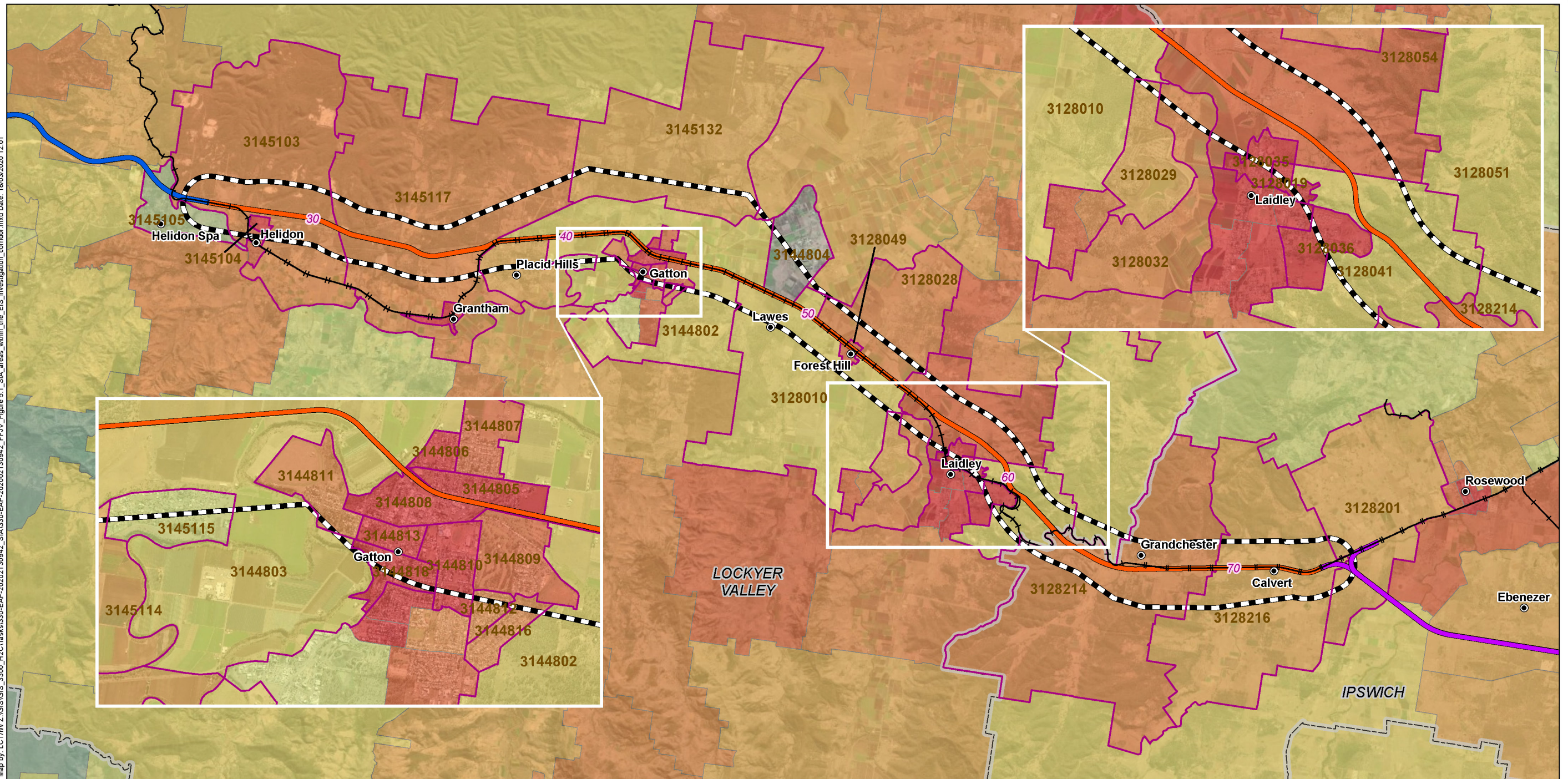
- SA1 3144812, a residential area near the town of Gatton located approximately 1 km south of the EIS investigation corridor, bound by Woodlands Road, Hennessy Street and Mackay Street (with a population density of 2,244.90 persons per km<sup>2</sup>)
- SA1 3144816 which is located approximately 1.3 km south of the EIS investigation corridor in a residential area bound by Mackay Street, Woodlands Road and comprising Rogers Drive and Davis Crescent (with a population density of 2,021.82 persons per km<sup>2</sup>)
- SA1 3128019 (1,500.95 persons per km<sup>2</sup>) in Laidley.

Eight SA1s recorded very low population densities of less than 15 people per km<sup>2</sup>, generally in areas of the Ipswich hinterland.

As shown in Table 5-1, only two of the SA1s had SEIFA IRSAD scores higher than the Queensland standardised rate of 1,000 (around Helidon) whilst 16 SA1s had SEIFA IRSAD scores were within the 1<sup>st</sup> and 2<sup>nd</sup> decile (including 11 within the 1<sup>st</sup> decile), indicating potential for disadvantage (lower socioeconomic resources) within the EIS investigation corridor.

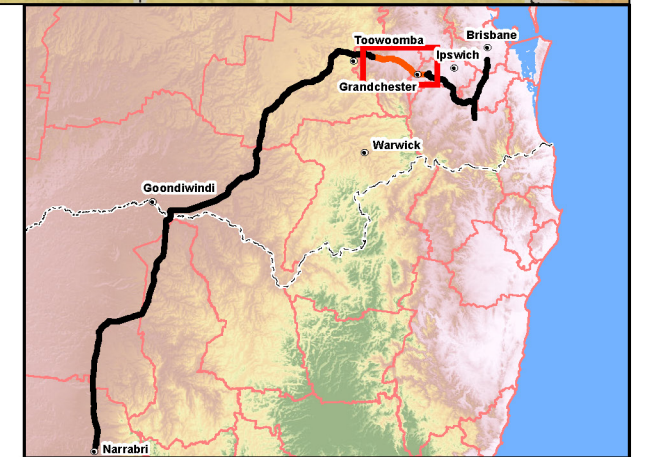


Map by: LCT/WW Z:\GIS\GIS\_3300\_H2C\Task\330-EAP-2020\2130942\_SIA\330-EAP-2020\2130942\_FF\IV\_Figure 5.1\_SIA\_areas\_within\_the\_EIS\_investigation\_corridor.mxd Date: 18/03/2020 12:01



**Legend**

- |                       |                                 |                            |
|-----------------------|---------------------------------|----------------------------|
| Chainage (km)         | <b>SEIFA IRSAD score</b>        | EIS investigation corridor |
| Localities            | Decile 1 (most disadvantaged)   | Local Government Areas     |
| Existing rail         | Decile 2                        | SA1 boundary               |
| G2H project alignment | Decile 3                        |                            |
| H2C project alignment | Decile 4                        |                            |
| C2K project alignment | Decile 5                        |                            |
|                       | Decile 6                        |                            |
|                       | Decile 7                        |                            |
|                       | Decile 8                        |                            |
|                       | Decile 9                        |                            |
|                       | Decile 10 (least disadvantaged) |                            |



A3 scale: 1:160,000  
0 1 2 3 4 5 km

**Helidon to Calvert**  
**Figure 5.1: SA1 areas within the EIS investigation corridor**



Lowest scores were seen in SA1 3144813 which corresponds to a local area of Gatton, approximately 600 m from the EIS investigation corridor (Harch Street), and SA1 3128035 which corresponds to the Laidley area.

**Table 5-1 SA1 Characteristics**

SA1	Area (km <sup>2</sup> )	Population			Population density (persons/ km <sup>2</sup> )	No. Dwellings (2016)	SEIFA IRSAD		Index of Economic Resources	
		2011	2016	Change (%)			Score	Decile	Score	Decile
3145105	5.52	240	327	36.25	59.20	106	1036	7	1105	9
3145103	47.56	333	310	-6.91	6.52	129	928	3	1014	6
3145104	0.39	266	306	15.04	782.61	104	854	1	912	2
3145101	0.36	235	246	4.68	684.09	116	878	2	900	2
3145117	66.03	318	516	62.26	7.81	207	944	3	1016	6
3145114	6.71	478	436	-8.79	65.01	167	974	4	1057	7
3144803	20.76	283	270	-4.59	13.01	94	985	5	1062	8
3145115	0.72	356	392	10.11	544.37	119	1024	6	1112	9
3145132	39.05	642	873	35.98	22.36	292	967	4	1049	7
3144811	0.63	237	217	-8.44	342.70	100	918	3	952	3
3144808	0.54	255	239	-6.27	442.02	124	824	1	810	1
3144813	0.21	259	216	-16.60	1047.53	119	790	1	791	1
3144818	0.32	455	409	-10.11	1261.18	189	857	1	840	1
3144808	0.54	255	239	-6.27	442.02	124	824	1	810	1
3144810	0.48	506	561	10.87	1164.63	209	848	1	869	1
3144805	0.41	535	408	-23.74	983.84	185	810	1	841	1
3144807	0.49	517	574	11.03	1164.06	238	875	2	882	2
3144809	0.76	440	486	10.45	643.37	206	905	2	930	3
3144806	0.17	224	193	-13.84	1168.99	92	825	1	848	1
3144812	0.17	349	374	7.16	2244.90	142	948	3	975	4
3144816	0.29	477	593	24.32	2021.82	214	943	3	927	3
3144802	13.59	412	502	21.84	36.93	175	987	5	1049	7
3144804	7.13	304	328	7.89	46.01	24	ND	ND	ND	ND
3128010	37.13	230	289	25.65	7.78	112	991	5	1057	7
3128028	16.29	334	379	13.47	23.26	157	949	3	1041	7
3128049	0.58	394	472	19.80	815.34	288	880	2	844	1
3128029	3.08	302	326	7.95	105.91	121	958	4	1038	7
3128032	6.36	323	336	4.02	52.80	133	932	3	1030	6
3128054	15.34	ND	408	N/A	26.60	160	914	2	938	3
3128035	0.93	453	493	8.83	531.08	266	797	1	817	1
3128019	0.42	606	631	4.13	1500.95	274	829	1	871	1
3128041	9.66	266	268	0.75	27.75	121	988	5	1012	6

SA1	Area (km <sup>2</sup> )	Population			Population density (persons/km <sup>2</sup> )	No. Dwellings (2016)	SEIFA IRSAD		Index of Economic Resources	
		2011	2016	Change (%)			Score	Decile	Score	Decile
<b>3128036</b>	1.84	528	669	26.70	363.41	253	860	1	914	2
<b>3128214</b>	57.39	504	444	-11.90	7.74	174	934	3	1011	6
<b>3128051</b>	37.89	301	360	19.60	9.50	130	988	5	1077	8
<b>3128216</b>	44.18	281	313	11.39	7.09	114	982	4	1023	6
<b>3128201</b>	29.22	235	229	-2.55	7.84	95	978	4	1033	7
<b>Totals</b>	-	<b>13,133</b>	<b>14,632</b>	8.31	-	<b>5,873</b>	-	-	-	-

Source: ABS 2017a

### 5.2.2 Local and regional populations

The SIA study area is comprised of the Ipswich and Lockyer Valley LGAs. Population growth in this region is higher than is typical for Queensland, with the majority of growth occurring in the Ipswich LGA. In 2016, the Lockyer Valley LGA had a population of 38,609 people, which was an increase of 3,655 people or 10.5 per cent since 2011, compared with Queensland’s 8.6 per cent. Comparatively, the Ipswich LGA’s population was five times larger at 193,737 people in 2016, and experienced much stronger growth, increasing by 26,386 people or 16.1 per cent over the five years (refer Table 5-2).

At the more localised State Suburb level, growth in the Lockyer Valley occurred in its principal rural activity centre of Gatton (up 3.4 per cent to a population of 7,102), and also Laidley, which is identified by the LVRC as a growth area for local service provision (up 8.3 per cent to a population of 3,803). Growth is also evident in Grantham (up 28.7 per cent to a population of 637) and Forest Hill (up 32.6 per cent to a population of 968). Helidon Spa and Grandchester experienced population decreases of 13.2 per cent and 11.9 per cent respectively.

The largest population centres in the Lockyer Valley LGA were the State Suburbs of Gatton (7,102 people, increasing by 3.4 per cent since 2011) and Laidley (3,803 people, increasing by 8.3 per cent since 2011), followed by Helidon (1,061, up 7 per cent since 2011). The largest population growth occurred in the State Suburbs of Laidley (increasing by 287 people or 8.2 per cent), Forest Hill (increasing by 968 people, or 32.6 per cent) and Gatton (increasing by 232 people, or 3.4 per cent).

Only two State Suburbs fall within the Ipswich LGA, both with comparatively small populations: Calvert at 310 people (an increase of 9.5 per cent since 2011) and Grandchester at 445 people (a decline of 11.9 per cent).

**Table 5-2 Population 2011 – 2016 – SSC, LGA and Queensland (number and percentage change)**

Location	Persons		Change	
	2011	2016	No.	%
Calvert	283	310	27	9.5
Forest Hill	730	968	238	32.6
Gatton	6,870	7,102	232	3.4
Grandchester	505	445	-60	-11.9
Grantham	495	637	142	28.7



Location	Persons		Change	
	2011	2016	No.	%
Helidon	1,054	1,061	7	0.7
Helidon Spa	623	541	-82	-13.2
Laidley	3,516	3,803	287	8.2
Laidley North	-	408	-	-
Lawes	305	329	24	7.9
Placid Hills	839	832	-7	-0.8
<i>Total</i>	14,314	15,895	1,581	11.0
<b>Statistical Area 2</b>				
Gatton	7,179	7,431	252	3.5
Lockyer Valley – East	17,541	19,816	2,275	13.0
Lockyer Valley – West	10,240	11,361	1,121	10.9
Rosewood	11,671	11,807	136	1.2
<i>Total</i>	46,631	50,415	3,784	8.1
<b>LGA</b>				
Lockyer Valley	34,954	38,609	3,655	10.5
Ipswich	166,903	193,737	26,834	16.1
<i>Total</i>	201,857	232,346	30,489	15.1
<b>Queensland</b>	4,332,739	4,703,193	370,454	8.6

Source: ABS Census, 2016a

### 5.2.3 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 Lockyer Valley LGA's 3.9 per cent was comparable to the State average (refer Table 5-3). The highest number of Indigenous people were in Gatton and Laidley (each with 235 and 185 people respectively) but represented a greater proportion of the population in Calvert (8.7 per cent), Helidon (5.9 per cent) and Laidley North (5.6 per cent).

**Table 5-3 Indigenous People, 2016 – SSC, LGA and Queensland (number and percentage)**

Location	Indigenous people	
	No.	% of total
Calvert	27	8.7
Forest Hill	42	4.3
Gatton	235	3.3
Grandchester	23	5.2
Grantham	23	3.6
Helidon	63	5.9
Helidon Spa	16	3.0
Laidley	185	4.9

Location	Indigenous people	
	No.	% of total
Laidley North	23	5.6
Lawes	5	1.5
Placid Hills	15	1.8
<b>LGA</b>		
Lockyer Valley	1,503	3.9
Ipswich	8,429	4.4
<b>Queensland</b>	186,482	4.0

Source: ABS Census, 2016e

Selected demographic characteristics of Indigenous populations in the Project region at the 2016 Census are shown in Table 5-4. Of note, percentages of Indigenous people aged 0-14 years were much higher than for non-Indigenous people in both LGAs, whilst percentages of Indigenous people aged 65 years and over were much lower, demonstrating a younger age profile and early mortality. Further data on Indigenous community health are provided in Section 5.7.6.

With respect to training and employment participation:

- Lower percentages of Indigenous people had non-school qualifications in both LGAs compared to the non-Indigenous people
- Labour force participation was lower than for non-Indigenous people at 49.5 per cent in the Lockyer Valley LGA and 60.7 per cent in the Ipswich LGA, compared to 71.6 per cent and 76.3 per cent respectively
- Indigenous unemployment rates were more than twice the unemployment rates for non-Indigenous people.

These data demonstrate that Indigenous populations are marginalised from the labour force and the opportunities that employment provides, due in part to lower qualification rates, and there is significant potential to increase their training and employment opportunities in the Project region.

Table 5-4 also includes selected housing data. Of note:

- Significantly higher percentages of Indigenous people were renting their homes, at 45.7 per cent compared to 23.8 per cent for non-Indigenous people in the Lockyer Valley LGA, and 64.3 per cent compared to 38.2 per cent in the Ipswich LGA
- More Indigenous households than non-Indigenous households were overcrowded (at 9.0 per cent in the Lockyer Valley LGA and 9.4 per cent in the Ipswich LGA)
- Median rents paid were slightly lower for Indigenous people in the Lockyer Valley GA and slightly higher in the Ipswich LGA, compared to rents paid by non-Indigenous households.

These data indicate that Indigenous people have less housing security than non-Indigenous people and would be more vulnerable to changes in rental housing availability.

**Table 5-4 Indigenous Population – Selected social characteristics, 2016**

	Lockyer Valley LGA		Ipswich LGA	
	Indigenous (%)	Non-Indigenous (%)	Indigenous (%)	Non-Indigenous (%)
Aged 0-14 yrs	38.3	18.9	39.3	23.1
Aged 65 years and over	3.6	16.6	3.1	11.0
Labour force participation rate	49.5	71.6	60.7	76.3
Unemployment rate	20.4	8.1	19.8	8.7
Completed Year 12	27.8	41.6	40.7	52.2
Non-school qualification	45.7	48.4	42.7	52.7
Rented housing	45.7	23.8	64.3	38.2
Overcrowding #	9.0	3.0	9.4	3.2
	Indigenous (\$)	Non-Indigenous (\$)	Indigenous (\$)	Non-Indigenous (\$)
Median rent	\$295.00	\$310.00	\$295.00	\$280.00

Source: DATSIP. 2020.

Notes: # defined as dwellings that need one or more extra bedrooms

#### 5.2.4 Population forecasts

Estimated population growth between 2011 and 2026 is shown in Table 5-5 and Table 5-6.

The most significant growth is expected in the Ipswich LGA with 13.2 per cent growth (28,568 people) projected over the four years between 2017 and 2021, and a further 30.2 per cent (71,097 people) in the five years between 2021 and 2026. This includes growth of 30.4 per cent (3,717 people) in the Rosewood SA2 in the four years from 2017 to 2021 and a further 59.8 per cent (13,246 people) in the five years between 2021 and 2026.

The Lockyer Valley LGA is projected to grow by 20 per cent (8,029 people) over the four years from 2017 to 2021, and then slow in the following five years to 9.4 per cent (4,514 people) from 2021 to 2026. The main growth is anticipated in Lockyer Valley – East SA2 increasing by 11.2 per cent (2,327 people) by 2021 and a further 11.5 per cent (2,649 people) by 2026.

**Table 5-5 Estimated population growth 2011 to 2026 – SA2 and LGA (number)**

Location	2011*	2016*	2017*	2021^	2026^
	No.	No.	No.	No.	No.
<b>SA2</b>					
Gatton	7,374	7,685	7,752	8,441	9,130
Lockyer Valley - East	18,048	20,341	20,722	23,049	25,698
Lockyer Valley - West	10,458	11,372	11,709	12,347	13,392
Rosewood	12,042	12,350	12,228	15,945	25,474
<i>Total</i>	<i>47,922</i>	<i>51,748</i>	<i>52,411</i>	<i>59,782</i>	<i>73,694</i>

Location	2011*	2016*	2017*	2021^	2026^
	No.	No.	No.	No.	No.
<b>LGA</b>					
Ipswich	172,200	200,123	206,467	235,035	306,132
Lockyer Valley	35,880	39,486	40,189	48,218	52,732
<i>Total</i>	<i>208,080</i>	<i>239,609</i>	<i>246,656</i>	<i>283,253</i>	<i>358,864</i>

Source: \* ABS Estimated Resident Population, 2011-2107 and ^ QGSO, 2017

**Table 5-6 Population growth 2011 to 2026 – SA2 and LGA (percentage change)**

Location	2011-12	2012-13	2013-14	2104-15	2015-16	2016-17	2017-21	2021-26
	(% of total)							
<b>Statistical Area 2 (SA2)</b>								
Gatton	1.8	0.9	1.0	0.1	0.4	0.9	8.9	8.2
Lockyer Valley - East	2.0	4.5	2.0	1.7	2.0	1.9	11.2	11.5
Lockyer Valley - West	1.4	1.9	2.1	1.4	1.6	3.0	5.4	8.5
Rosewood	0.4	-2.6	0.1	1.6	3.2	-1.0	30.4	59.8
Total	1.4	1.6	1.4	1.4	1.9	1.3	14.1	23.3
<b>LGA</b>								
Ipswich	3.5	3.1	3.1	2.7	2.9	3.2	13.8	30.2
Lockyer Valley	1.9	3.1	1.9	1.3	1.6	1.8	20.0	9.4
Total	3.2	3.1	2.8	2.5	2.7	2.9	14.8	26.7

Source: ABS Estimated Resident Population, 2011-2107 and QGSO, 2017

### 5.2.5 Families and households

Family types in the SIA study area in 2016 are shown in Table 5-7. In the Lockyer Valley LGA, 42.6 per cent of families identified as couple-only, high compared with 31.7 per cent for Ipswich LGA and 39.4 per cent for Queensland. Another 39.8 per cent were couple-with-children families (low compared with 45.7 per cent for Ipswich and 42.5 per cent for Queensland) and 16.1 per cent were sole-parent families, similar to Queensland at 16.5 per cent, but much lower than Ipswich at 20.9 per cent.

By contrast, Ipswich recorded a higher percentage of couple-with-children families (45.7 per cent) while almost 21 per cent of families in the Ipswich LGA were sole-parent families.

At the State Suburb level, Forest Hill and Grantham had the highest percentages of couple-only families (46.9 per cent and 44.2 per cent).

Placid Hills and Calvert had a higher percentage of couple-with-children families (48.1 per cent and 43.8 per cent respectively) compared with Queensland (42.5 per cent) and elsewhere in the SIA study area.

The percentage of sole-parent families was significantly higher in Laidley (27.8 per cent), Laidley North (24.5 per cent), Grandchester (21.3 per cent) and Helidon (21.0 per cent) than is typical for Queensland (16.5 per cent) and elsewhere in the SIA study area.

**Table 5-7 Family type, 2016 – SSC, LGA and Queensland (percentage)**

Location	Couple Only (% of total)	Couple with Children (% of total)	Sole Parent Family (% of total)	Other Family (% of total)	Total (% of total)
Calvert	38.2	43.8	18.0	0.0	100
Forest Hill	46.9	33.8	16.7	2.6	100
Gatton	43.1	36.2	18.3	2.4	100
Grandchester	41.8	36.9	21.3	0.0	100
Grantham	44.2	36.8	19.0	0.0	100
Helidon	40.9	35.6	21.0	2.5	100
Helidon Spa	35.5	48.6	15.9	0.0	100
Laidley	39.8	29.2	27.8	3.1	100
Laidley North	38.8	36.7	24.5	0.0	100
Lawes <sup>^</sup>	-	-	-	-	-
Placid Hills	40.9	48.1	9.4	1.7	100
<b>LGA</b>					
Lockyer Valley	42.6	39.8	16.1	1.4	100
Ipswich	31.7	45.7	20.9	1.7	100
<b>Queensland</b>	39.4	42.5	16.5	1.6	100

Note: <sup>^</sup> Due to the small population for this area, limited information has been provided.

Source: ABS Census, 2016a

Table 5-8 identifies the household types in the SIA study area at the 2016 Census. Both the Lockyer Valley and Ipswich LGAs had a higher percentage of family households than the State (68.6 per cent and 71.7 per cent compared with 66.4 per cent in Queensland). The Lockyer and Ipswich LGA also had a slightly lower percentage of lone person households than Queensland (19.0 per cent and 19.2 per cent compared with 21.7 per cent in Queensland).

The Lockyer Valley had a similar percentage of group households to Queensland (7.8 per cent compared with 7.5 per cent for Queensland), while Ipswich was lower at 6.0 per cent for Ipswich LGA. The higher representation in the Lockyer Valley may reflect shared accommodation arrangements amongst students attending the UQ Gatton campus.

**Table 5-8 Household type, 2016 – SSC, LGA and Queensland (percentage)**

Location	Family Household (% of total)	Lone Person Household (% of total)	Group Household (% of total)	Other (% of total)	Total (% of total)
Calvert	77.2	14.9	0.0	7.9	100
Forest Hill	48.9	22.6	7.5	21.1	100
Gatton	59.8	24.4	8.7	7.1	100
Grandchester	70.0	18.0	5.3	6.7	100
Grantham	72.1	15.9	3.1	8.8	100
Helidon	66.1	22.0	2.8	9.0	100
Helidon Spa	65.6	19.4	1.6	13.4	100

Location	Family Household (% of total)	Lone Person Household (% of total)	Group Household (% of total)	Other (% of total)	Total (% of total)
Laidley	59.2	28.4	3.6	8.7	100
Laidley North	62.2	18.9	14.2	4.7	100
Lawes	33.3	0.0	46.7	20.0	100
Placid Hills	83.8	9.4	3.6	3.2	100
<b>LGA</b>					
Ipswich	71.7	19.0	3.3	6.0	100
Lockyer Valley	68.6	19.2	4.4	7.8	100
<b>Queensland</b>	66.4	21.7	4.3	7.5	100

Source: ABS Census, 2016a

### 5.2.6 Demographic characteristics

#### Age and gender

Between 2011 and 2016, the median age of residents of the Lockyer Valley LGA increased by two years from 37 to 39 years (compared to Queensland’s median age change of 36 years to 37 years), reflecting an ageing population. By contrast the Ipswich LGA has maintained its young demographic, with an average age of 32 years in 2011 and in 2016.

In 2016, the Lockyer Valley LGA had an even distribution of males and females, each representing 50 per cent of the population. In the Ipswich LGA, females made up 50.6 per cent of the population, consistent with the Queensland average.

Local communities within Lockyer Valley LGA recorded a reasonably even distribution of male and females, with the largest discrepancy in Lawes where females represented 69.9 per cent of the recorded population. Laidley, Grantham, Gatton and Forest Hill all had a higher percentage of females than the state average (52.9 per cent, 52.4 per cent, 51.8 per cent and 51.4 per cent respectively) (ABS, 2016) (Table 5-9).

**Table 5-9 Change in median age and gender, 2011 to 2016 (years and percentage change)**

Location	Median Age (years)			Gender (2016)	
	2011	2016	Change 2011-16	Male (% of total)	Female (% of total)
Calvert	39	45	6	51.6	48.4
Forest Hill	38	35	-3	48.6	51.4
Gatton	32	33	1	48.2	51.8
Grandchester	40	42	2	50.3	49.7
Grantham	44	42	-2	47.6	52.4
Helidon	39	38	-1	49.4	50.6
Helidon Spa	38	39	1	52.1	48.4
Laidley	38	41	3	47.1	52.9
Laidley North^	-	27	-	49.4	50.6

Location	Median Age (years)			Gender (2016)	
	2011	2016	Change 2011-16	Male (% of total)	Female (% of total)
Lawes	19	20	1	30.1	69.9
Placid Hills	34	39	5	50.1	49.9
<b>LGA</b>					
Ipswich	32	32	0	49.4	50.6
Lockyer Valley	37	39	2	50	50
<b>Queensland</b>	36	37	1	49.4	50.6

Note: ^ Data not comparable between Census periods due to boundary changes

Source: ABS, 2016

Table 5-10 shows the percentages recorded for age groups identified as potentially vulnerable to changing social conditions, including children, young people and seniors.

The Lockyer Valley LGA recorded a high percentage of people aged over 65 years (16.2 per cent compared to the Queensland average of 15.3 per cent), with the highest percentage recorded in Laidley (23.2 per cent). Calvert also recorded a high percentage of persons aged over 65 years (22.1 per cent).

The Ipswich LGA recorded a high percentage of persons under the age of 16 years (23.7 per cent compared to the Queensland average of 19.4 per cent).

At the State Suburb level, Lawes had a particular high representation (90.2 per cent) aged between 16 and 24 years, reflecting the high student population there (at 2016 the median age here was 20 years – ABS 2016c). Laidley North and Forest Helidon also had a relatively high representation in this age group compared with Queensland (25.9 per cent and 20.8 per cent compared with 13.0 per cent in Queensland). Older populations over 65 years of age were most highly represented in Laidley (23.2 per cent) and Calvert (22.1 per cent) compared with Queensland (15.3 per cent) and were greatest in number in the main townships of Gatton (1,236 people) and Laidley (884 people).

**Table 5-10 Selected Age Groups, 2016 – SSC, LGA and Queensland (number and per cent)**

Location	<15 yrs No.	15-24 yrs No.	>65 yrs No.	<15 yrs (% of total)	16-24 yrs (% of total)	>65 yrs (% of total)
Calvert	43	42	68	14.0	13.7	22.1
Forest Helidon	165	199	144	17.2	20.8	15.0
Gatton	1,251	1,107	1,236	17.6	15.6	17.4
Helidon	73	58	67	17.2	13.6	15.8
Grantham	119	70	103	19.0	11.2	16.5
Helidon	249	129	172	23.5	12.2	16.3
Helidon Spa	107	84	49	20.3	13.7	8.9
Laidley	754	512	884	19.8	13.4	23.2
Laidley North	84	106	25	20.5	25.9	6.1
Lawes	4	295	0	1.2	90.2	0.0
Placid Hills	164	134	117	19.8	16.1	14.1



Location	<15 yrs No.	15-24 yrs No.	>65 yrs No.	<15 yrs (% of total)	16-24 yrs (% of total)	>65 yrs (% of total)
<b>LGA</b>						
Ipswich	45,918	27,393	20,751	23.7	14.1	10.7
Lockyer Valley	7,547	5,320	6,246	19.5	13.8	16.2
<b>Queensland</b>	912,697	613,144	717,951	19.4	13.0	15.3

Source: ABS Census, 2016a

### Disability

Table 5-11 indicates disability levels as the number of people requiring assistance with a core disability. The Lockyer Valley and Ipswich LGAs both had a slightly higher percentage of residents requiring assistance with core activities than Queensland average (5.9 per cent and 5.7 per cent compared to 5.2 per cent for Queensland). At the State Suburb level, the highest percentages of people needing assistance were in Laidley (11.3 per cent) and Grantham (8.2 per cent) which may be a reflection of population age in these communities. Disability levels were also higher in Laidley North (at 6.9 per cent), Gatton and Forest Hill (both at 6.0 per cent) compared to Queensland (5.2 per cent).

**Table 5-11 Core Disability (need for assistance), 2016 – SSC, LGA and Queensland (number and percentage)**

Location	Has need for assistance	
	No.	% of total
Calvert	17	5.5
Forest Hill	58	6.0
Gatton	424	6.0
Grandchester	23	5.2
Grantham	52	8.2
Helidon	57	5.4
Helidon Spa	21	3.9
Laidley	430	11.3
Laidley North	28	6.9
Lawes <sup>^</sup>	-	-
Placid Hills	47	5.6
<b>LGA</b>		
Lockyer Valley	9,426	5.9
Ipswich	11,040	5.7
<b>Queensland</b>	243,267	5.2

Note: <sup>^</sup>Data not available due to small population size. Source: ABS Census, 2016a

### Level of education

Table 5-12 reports on schooling completion at 2016 and shows that both the Lockyer Valley and Ipswich LGAs recorded higher percentages of people who did not go to school or attended to Year 8 or below, compared to Queensland (9.2 per cent, 6.3 per cent and 5.4 per cent respectively). Accordingly, the Lockyer Valley had a relatively low level of Year 11 or 12 completions (44.4 per cent) and while completions were higher in Ipswich LGA (56 per cent), both LGAs were still lower than levels for Queensland (58.9 per cent). A lower proportion of educational attainment within the Lockyer Valley LGA may be attributed to the greater proportions of older people (education is more accessible to the current generation) and the higher proportion of employment in agriculture.

**Table 5-12 Highest level of schooling completed 2016 – LGA and Queensland (number and percentage)**

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.	(% Total)	No.	(% Total)	No.	(% Total)	
<b>Lockyer Valley LGA</b>	2,749	9.2	10,293	34.5	13,226	44.4	29,816
<b>Ipswich LGA</b>	8,890	6.3	40,967	29.0	79,056	56.0	141,164
<b>Queensland</b>	196,488	5.4	964,903	26.5	2,146,809	58.9	3,643,834

Source: ABS, 2016a

Table 5-13 shows that a relatively low proportion of the population in the Lockyer Valley LGA obtained a bachelor’s degree or higher (9.5 per cent), compared with the Ipswich LGA (12 per cent), while both were lower compared to Queensland (18.3 per cent). However, Certificate qualification levels were similar to levels for Queensland in the Lockyer Valley LGA (21.8 per cent compared with 21.3 per cent in Queensland) and higher in Ipswich LGA (24.4 per cent).

**Table 5-13 Non-school qualifications, 2016 – LGA and Queensland (number and percentage)**

Area	Level of education (a)					
	Bachelor’s degree or higher (b)		Advanced diploma or diploma		Certificate (c)	
	No.	(% of total)	No.	(% of total)	No.	(% of total)
<b>Lockyer Valley LGA</b>	2,946	9.5	2,141	6.9	6,779	21.8
<b>Ipswich LGA</b>	17,728	12	12,790	8.7	36,052	24.4
<b>Queensland</b>	693,410	18.3	330,619	8.7	807,105	21.3

Note: (a) Includes persons aged 15 years and over with a qualification (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. (d) Includes inadequately described and not stated level of education responses. Source: ABS, 2016a

### 5.2.7 Income and disadvantage

#### Incomes

As shown in Table 5-14, median household incomes in the Lockyer Valley LGA (\$1,198/week) were roughly \$200 less than in the Ipswich LGA (\$1,410/week) and across Queensland (\$1,402/week).

The average household income was lowest in the State Suburbs of Lawes (\$574/week, possibly reflecting the relatively high level of students resident here) and Laidley (\$879/week), and highest in Placid Hills (\$1,694/week) and Calvert (\$1,437/week).

The average household size only varies slightly across the LGA, with an average household size of 2.7 in the Lockyer Valley, 2.8 in Ipswich LGA (due to the higher percentage of families) and 2.6 for Queensland.

**Table 5-14 Household Income and Household Size, 2016 – SSC, SA2, LGA and Queensland**

Location	Median Weekly Household Income\$/week	People per Household Number
Calvert	1,437	2.7
Forest Hill	958	2.5
Gatton	1,044	2.6
Grandchester	1,312	2.7
Grantham	1,215	2.7
Helidon	1,097	2.5
Helidon Spa	1,420	2.8
Laidley	879	2.4
Laidley North	1,166	2.7
Lawes	574	2.5
Placid Hills	1,694	2.9
<b>Statistical Area 2</b>		
Gatton	1,041	2.6
Lockyer Valley - East	1,154	2.7
Lockyer Valley - West	1,403	2.8
Rosewood	1,355	2.7
<b>LGA</b>		
Lockyer Valley	1,198	2.7
Ipswich	1,410	2.8
<b>Queensland</b>	1,402	2.6

Source: ABS Census, 2016a

### Internet access

Access to information and services which support wellbeing are increasingly being accessed through the internet. In 2016, 18.8 per cent of the Lockyer Valley LGA did not access the internet from their dwelling, compared to 13.8 per cent of the Ipswich LGA and 13.6 per cent of Queensland (Table 5-15). Of note at the SA2 level, a quarter of dwellings in the Gatton SA2 (24.9 per cent) did not have a dwelling internet connection in 2016. The highest rates of access to dwelling internet connections from dwellings were recorded in Lockyer Valley – West SA2 (82.2 per cent) at levels similar to Ipswich LGA (83.8 per cent) and Queensland (83.7 per cent).

**Table 5-15 Dwelling internet connection, 2016 – SA2, LGA and Queensland (percentage)**

Location	Internet not accessed (% of total)	Internet accessed (% of total)	Not Stated (% of total)
<b>Statistical Area 2 (SA2)</b>			
Gatton	24.9	70.9	4.1
Lockyer Valley – East	18.6	77.1	4.3
Lockyer Valley – West	14.9	82.2	2.7
Rosewood	17.8	79.7	2.5
<b>LGA</b>			
Lockyer Valley	18.8	77.4	3.8
Ipswich	13.8	83.8	2.5
<b>Queensland</b>	13.6	83.7	2.7

Source: ABS Census, 2016a

### Socio-economic advantage and disadvantage

At the LGA level SEIFA indices do not demonstrate significant disadvantage, however, this picture changes at a finer grained level. According to the IRSAD index (refer Table 5-16):

- The Lockyer Valley LGA was neutrally placed with a decile of 5 and ranking just below the mid-point at position 36 amongst 80 LGAs, and as a whole can be considered as neither advantaged nor disadvantaged relative to other LGAs in Queensland
- The Ipswich LGA was modestly advantaged compared with the Lockyer Valley LGA with a decile of 6 and ranked in position 49, placing it among the more advantaged of 80 LGAs in Queensland
- Two SA2s fell within the 20 per cent most disadvantaged SA2s in the State, with both Gatton and Lockyer Valley-East SA2s placed in decile 2 and amongst the 100 most disadvantaged SA2s in Queensland (at positions 59 and 97 respectively).

According to the IEO index:

- The Lockyer Valley LGA is modestly disadvantaged placed in decile 4 and ranked the top 26 most disadvantage LGAs of 80 LGAs in Queensland
- Similar to the IRSAD, the Ipswich LGA was advantaged compared with the Lockyer Valley LGA with a decile of 7 and ranked in position 43, placing it among the more advantaged of 80 LGAs in Queensland in terms of education and occupation.
- Disadvantage is more evident at the SA2 level, with three of the four SA2s in the SIA study area amongst the 30 per cent most disadvantaged SA2s: Gatton in decile 1, Lockyer Valley-East in decile 2 and Rosewood in decile 3. Gatton and Lockyer Valley-East SA2s are ranked amongst the 100 most disadvantaged SA2s on this index (Gatton at position 48 and Lockyer Valley-East at position 69).

**Table 5-16 Relative socio-economic advantage and disadvantage, 2016 – SA2 and LGA**

Location	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/ 80 LGAs			Position in 526 SA2s/ 80 LGAs
<b>Statistical Area 2</b>						
Gatton	899	2	59	887	1	48
Lockyer Valley - East	917	2	97	898	2	69
Lockyer Valley - West	979	5	232	956	5	221
Rosewood	952	4	173	925	3	141
<b>LGA</b>						
Lockyer Valley	932	5	36	913	4	26
Ipswich	948	7	49	932	6	43

Source: ABS Census, 2017a

### 5.2.8 Travel behaviour

#### Transport networks

The Warrego Highway is the main arterial road through the Lockyer Valley LGA, connecting with Ipswich and Brisbane to the east (via the Ipswich and Centenary Motorways) and with Toowoomba, Dalby, Chinchilla, Miles, Roma and Charleville to the west.

The Lockyer Valley LGA’s main road network also includes Rosewood-Laidley Road, Gatton-Laidley Road and Gatton-Helidon Road which provides an alternative network south of the Warrego Highway connecting Rosewood to Helidon. Main roads running north from this central network include Laidley-Plainland Road, Forest Hill–Fernvale Road and the Gatton-Esk Road. To the south of the central road network includes Mulgowie Road, Mount Sylvia Road, Gatton-Clifton Road (LVRC 2015).

There are two airports that provide access to the Lockyer Valley region: the Brisbane West Airport near Toowoomba (approximately 30 minute drive) and the Brisbane Domestic and International Airport near Brisbane CBD (approximately 1.15 hour drive). This also serves as the main airport for Ipswich LGA.

Ipswich LGA is well serviced by passenger rail via the Ipswich/Rosewood from Brisbane, with connecting bus services from Rosewood to Gatton.

Further information including maps describing the road network is provided in EIS Appendix U: Traffic impact assessment technical report.

#### Vehicle ownership

In 2016, the Lockyer Valley LGA had a higher number of motor vehicles per dwelling than the Ipswich LGA and Queensland (2.2 vehicles per dwelling compared to 1.9 and 1.8 respectively) (refer Table 5-17). This reflects the Lockyer Valley LGA’s higher reliance on private vehicle travel and its limited access to a public transport network.

At the State Suburb level, vehicle ownership is highest in Placid Hills and Calvert (both at 2.6 vehicles per dwelling), higher than the Queensland rate of ownership (1.8 vehicles per dwelling). Grandchester Grantham, Forest Hill and Helidon Spa also had higher levels (at 2.5, 2.4 and 2.3 vehicles per dwelling respectively). Lawes had the lowest median rate of ownership (at 1.2 vehicles per dwelling), likely reflecting the high student population there.

**Table 5-17 Motor Vehicle Ownership, 2016 – SSC, SA2, LGA and Queensland (number)**

Location	Motor Vehicles per dwellings
Calvert	2.6
Forest Hill	2.3
Gatton	1.8
Grandchester	2.5
Grantham	2.4
Helidon	1.9
Helidon Spa	2.3
Laidley	1.7
Laidley North	1.9
Lawes	1.2
Placid Hills	2.6
<b>Statistical Area 2 (SA2)</b>	
Gatton	1.8
Lockyer Valley - East	2.1
Lockyer Valley - West	2.4
Rosewood	2.3
<b>LGA</b>	
Lockyer Valley	2.2
Ipswich	1.9
<b>Queensland</b>	1.8

Source: ABS, 2016a

### Passenger transport

The Ipswich/Rosewood train line provides passenger rail services from Rosewood to Brisbane, passing through Ipswich stations seven days a week. A Translink Bus (route 539) provides a connection from Rosewood through Grandchester, Laidley, Forest Hill, Lawes, Gatton, Grantham and Helidon, with twelve outbound buses from Rosewood scheduled on a weekday, and six inbound buses scheduled from Gatton to Rosewood on a weekday. On a weekend, the service runs four inbound and four outbound services between Rosewood and Gatton (TransLink Journey Planner, 2018).

Greyhound Australia also provides a daily service between Brisbane and Toowoomba, stopping at Plainland, UQ Gatton Campus, Gatton & Withcott, which can also stop at Grantham, Helidon and Helidon Spa on request (Lockyer Valley Visitor Information Centre, 2015).

UQ Gatton also offers a shuttlebus between its St Lucia and Gatton Campuses, as well as the Greyhound connector bus from Rosewood station to the Gatton Campus.

Community consultation for the SIA also identified some community members (raised by residents of Grantham and Gatton) preferred to drive to Dinmore Station where commuter parking is convenient, and connections are available north and south.

### **School bus routes**

The Gatton Bus Service provides 17 different bus runs for students eligible under the Queensland Government's School Transport Assistance Scheme, and also the Non-State Schools Transport Assistance Scheme (Gatton Bus School Service, 2018). Relevant areas serviced by the Gatton Bus Service include:

- Buaraba, Gatton-Esk Rd (Run 1), for Gatton State School, Lockyer District High School, Peace Lutheran Primary School, and Our Lady of Good Counsel (OLGC)
- Lockrose, Lockyer Waters, Brightview (Run 2) for Gatton State School, Lockyer District High School, Peace Lutheran Primary School, OLGC, and Lake Clarendon
- Glenore Grove, UQ (Run 5) for Gatton State School, Lockyer District High School, Peace Lutheran and OLGC
- Forest Hill, Laidley Heights (Run 6) for Laidley State School, St Marys, Laidley High School, Forest Hill State School, Gatton State School, Lockyer District High School, Peace Lutheran and OLGC
- Laidley Heights (Run 7) for Blenheim State School Laidley State School, St Marys, Laidley High School, Forest Hill State School, Gatton State School, Lockyer District High School, Peace Lutheran and OLGC
- Helidon, Grantham (Run 12) Gatton State School, Lockyer District High School, Grantham State School, Peace Lutheran and OLGC.

Bus Queensland also provides services to schools in the Lockyer Valley, Ipswich, Toowoomba and Park Ridge. Schools serviced by Bus Queensland in the EIS investigation corridor include Laidley District State School, Laidley State High School, St Mary's School (Laidley).

### **Crash data**

Crash data provided by DTMR are provided in detail in EIS Appendix U: Traffic impact assessment technical report. The data indicate that, between 2012 and 2017, there were 103 crashes on the Cunningham Highway, 523 crashes on the Warrego Highway, 11 crashes on each of the Gatton Helidon Road and Gatton Laidley Road, 23 crashes on Rosewood Laidley Road, and small numbers of crashes on local government roads within the Laidley and Ipswich LGAs.

### **Journey to work**

A high percentage of employed people within the EIS investigation corridor travelled to work via car, as a driver or worked at home (refer Table 5-18). In the SIA study area's communities, the percentage of employed people travelling to work by car was highest in Placid Hills (68.53 per cent), while Calvert recorded the highest percentage of people working from home (10.48 per cent).

Lawes recorded a very high percentage of people using active transport with approximately 13 per cent of people walking to work. This is largely reflective of the staff and student population accessing the UQ Gatton Campus but is a percentage far higher than national and state averages for working to work, which are usually between 5-10 per cent (ABS 2016).

Consultation with UQ Gatton identified pedestrian movements as a key consideration for campus planning, with current plans in development to create a pedestrian walkway from the campus into Gatton township.

Gatton township was also identified in consultation as supporting a lot of different pedestrian traffic including among the UQ student population, locally-based migrants, seasonal workers and backpackers, and also among ageing residents travelling either on foot or with mobility aids.

### 5.2.9 Summary of key demographic features

Key features of the social baseline which are relevant to local sensitivity to social impacts include:

- The Project traverses 16 SA1s (43 per cent of the total SA2s traversed) with IRSAD scores in the bottom two deciles, indicating the potential for disadvantage which could affect residents' capacity for participation in Project consultation, or exacerbate disadvantage if there are impacts on secure tenure, quality of life or property use
- Most Project communities had a population base of less than 1,000 people in 2016, with the exception of Helidon (1,061), the regional centre of Gatton (7,102) and Laidley (3,803), which are both identified as growth areas in the Lockyer Valley
- While smaller population bases, Forest Hill and Grantham both experienced strong population growth between 2011 and 2016 (up 32.6 per cent and 28.7 per cent respectively)
- Population growth of 30.2 per cent is expected in the Ipswich LGA between 2021 and 2026, whilst growth in the Lockyer Valley LGA is expected to remain steady at 9.4 per cent between 2021 and 2026.
- Percentages of Indigenous people were higher than the State average of 4.0 per cent in Calvert (8.7 per cent), Helidon (5.9 per cent) Laidley North (5.6 per cent) and Grandchester (5.2 per cent)
- Ipswich LGA has a consistently younger demographic with a median age of 32 years, while the median age of Lockyer Valley LGA residents increased by two years from 37 to 39
- Lockyer Valley LGA a higher percentage of residents aged over 65 years (16.2 per cent compared to the Queensland average of 15.3 per cent), with the highest percentage in Laidley (23.2 per cent), while Calvert also recorded a high percentage of persons aged over 65 years (22.1 per cent)
- Laidley (11.3 per cent) and Grantham (8.2 per cent) also had a high percentage of residents requiring assistance due to disability compared to the State (5.2 per cent) which likely correlates with their older populations
- The average household income was lowest in Lawes (\$574 per week) and Laidley (\$879 per week), and above the Queensland average (\$1,402 per week) in Placid Hills (\$1,694 per week) and Calvert (\$1,437 per week)
- 18.8 per cent of the Lockyer Valley LGA did not access the internet from their dwelling, compared to 13.8 per cent of the Ipswich LGA and 13.6 per cent of Queensland. Of note, one quarter of dwellings (24.9 per cent) in the Gatton SA2 did not have a dwelling internet connection in 2016, which is likely in part to be attributed to an older median age in this area, and the rural environment.
- While Ipswich residents have good access to passenger rail services, local communities of the Lockyer Valley region which include village residents, transient workers, students and rural landowners are heavily reliant on private transport and have limited to no public transport.



**Table 5-18 Methods of travel to work for employed persons, 2016 – SSC and LGA (percentage)**

Area	Car, as driver	Worked at home	Walked only	Car, as passenger	Truck	Motorbike/scooter	Bus	Bicycle	Taxi	Other	Did not go to work	Method of travel not stated
	(% of total)											
<b>Calvert</b>	65.32	10.48	4.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.71	0.00
<b>Forest Hill</b>	65.14	4.57	3.85	7.93	1.92	1.44	1.44	0.00	0.00	2.16	12.02	0.96
<b>Grantham</b>	61.90	5.95	3.97	7.54	3.97	1.19	0.00	0.00	0.00	0.00	11.51	3.17
<b>Gatton</b>	64.14	2.50	2.88	15.52	1.15	0.59	0.83	0.31	0.14	0.66	9.89	1.01
<b>Grandchester</b>	64.43	8.25	4.12	5.15	2.58	0.00	0.00	0.00	0.00	1.55	11.86	0.00
<b>Helidon</b>	71.9	5.1	2.2	5.6	4.1	0.7	0.0	0.0	0.0	0.0	8.0	0.7
<b>Helidon Spa</b>	74.4	5.1	2.6	6.4	2.1	0.0	0.0	0.0	0.0	1.7	9.4	3.9
<b>Laidley North</b>	65.50	2.92	1.75	8.77	1.75	0.00	0.00	0.00	0.00	0.00	13.45	2.34
<b>Laidley</b>	67.04	4.35	4.00	6.61	1.13	0.00	0.87	0.35	0.00	0.70	13.39	2.09
<b>Lawes</b>	31.15	6.56	13.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39.34	0.00
<b>Placid Hills</b>	68.53	5.77	2.14	5.27	1.65	0.66	0.66	0.00	0.00	0.00	14.00	0.99
<b>LGA</b>												
<b>Lockyer Valley</b>	68.22	5.81	2.55	7.01	1.97	0.78	0.56	0.10	0.03	0.57	11.06	1.27
<b>Ipswich</b>	74.13	3.19	1.46	6.01	1.15	1.06	0.75	0.34	0.15	0.53	10.29	0.94

Source: ABS, 2016a.

## 5.3 Community and cultural values

### 5.3.1 Amenity and quality of life

Amenity refers to the use and enjoyment of private and public properties. Stakeholder consultation conducted as part of the EIS and SIA indicates that residential amenity in areas close to the EIS investigation corridor is characterised by:

- The strong value placed on the unique character of local towns and community identities
- Low population density, enabling privacy and enjoyment of homes and the outdoors
- Rural land uses (e.g. low-density urban form, open spaces, grazing and crop production)
- Access to facilities which support community interaction and healthy lifestyles within a few minutes' drive
- Connections and mutual reliance between neighbours
- The rural landscape, characterised by hills, plains, vegetation and vistas across rural land
- Access to business and service hubs less than one hours' drive away.

Landowners in and near the EIS investigation corridor enjoy a rural lifestyle – a quiet environment and farming as a primary source of livelihood and/or lifestyle. Aspects which 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. Local residents emphasised the Lockyer Valley's quiet country environment in close proximity to three major service centres (Brisbane, Ipswich, Toowoomba) plays a strong part in the amenity, lifestyle and quality of life of its residents.

Residents within and near the EIS investigation corridor have access to rural and scenic views primarily made up of farms and cultivated land, homes and homesteads, open grassland, forested areas and the Little Liverpool Range.

A number of Lockyer Valley and Ipswich LGA communities have links with historic and current rail operations that have formed an accepted part of the local landscape. Many local stakeholders have made mention of former passenger rail services connecting local communities, and a desire to see future passenger rail plans prioritised. This aspect was identified on numerous occasions in consultation as pivotal to improving local access to employment and improving quality of life.

### 5.3.2 Cultural heritage

The EIS investigation corridor is located within country to which Yuggera Ugarapul People are connected. Aboriginal cultural heritage studies and surveys were undertaken in conjunction with the EIS process, as the basis for development of Cultural Heritage Management Plans with the Yuggera Ugarapul People.

Assessment of non-Indigenous cultural heritage in the EIS investigation corridor identified places in the Register of the National Estate, the State Heritage Register, the LVRC Local Heritage Register and the ICC Local Heritage Register. State heritage-registered sites include war memorials in Gatton and Forest Hill, the Grandchester Sawmills, the Grandchester Railway complex, a shop in Forest Hill, the UQ Gatton Campus and hotels in Gatton and Forest Hill. Sites registered on local heritage registers are varied and include two cemeteries, community facilities, railway infrastructure, shops, community halls and a school. Residents also see non-registered places such as some older houses and farm infrastructure as part of the area's cultural heritage. The potential for impacts on cultural heritage places is discussed in detail in EIS Appendix S: Cultural heritage survey report, and summarised in this report at Section 7.1.7.

### 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 and the percentages of people who were not proficient in the English language, as shown in Table 5-19.

In 2016, both the Lockyer Valley and Ipswich LGAs had a higher percentage of people born in Australia than for the State (78.2 per cent, 72.9 per cent and 71.1 per cent respectively). Local communities generally had a strong representation of Australian-born residents (above 75 per cent) with the exception of Gatton which had an Australian-born population of 68.3 per cent. Smaller percentages of Gatton’s population were born in Taiwan (4.4 per cent), India (2.2 per cent), and Korea (1.8 per cent). Data for Lawes SSC was unavailable due to the small population count (ABS, 2016).

The State Suburb of Gatton has an unusually high representation of people not proficient in English (7.3 per cent compared with 1.8 per cent for Queensland). This is likely to reflect the reliance by many agricultural operations on a workforce mix comprising backpackers and migrants, and also reflects the number of international students living in Gatton and attending the UQ campus. The community has been described during consultation as having unique strengths as a culturally diverse, yet close-knit and cohesive community.

**Table 5-19 Cultural Diversity Indicators, 2016 – SSC, LGA and Queensland (percentage)**

Location	Born in Australia (% of total)	Not Proficient in English Language (% of total)
Calvert	85.3	0.0
Forest Hill	78.9	10.3
Gatton	68.3	25.7
Grandchester	81.0	0.0
Grantham	81.1	0.0
Helidon	84.3	0.0
Helidon Spa	78.9	0.0
Laidley	79.6	4.5
Laidley North	83.7	0.0
Lawes <sup>^</sup>	-	-
Placid Hills	87.3	0.0
<b>LGA</b>		
Lockyer Valley	78.2	7.3
Ipswich	72.9	9.3
<b>Queensland</b>	71.1	1.8

Note: <sup>^</sup> Data unavailable due to small population count

Source: ABS, 2016c

### 5.3.4 Community identity

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

The Lockyer Valley’s identity has been forged on its rich farmland, with enduring industry strengths in horticulture and agriculture and a modern reputation as ‘Australia’s Salad Bowl’, while historically its small population settlements were aided by the development of the railway from Ipswich to Toowoomba. Lockyer Valley continues to be home to rural, low density community settlements, and an attractive country lifestyle supported by an expansive regional centre in Gatton, supported by residential growth in Plainland and the future development of a service centre in Laidley. A representative comment from a survey respondent describes community cohesion as integral to community identity: “These are tight knit communities that help each other. Especially in times of duress like the floods in 2011 and 2013.... It is a nice place to live”.

Ipswich’s identity is informed by the City’s history as an administrative hub, and by economic strengths in manufacturing, the public service, railway servicing and mining. Urban form is predominantly low rise throughout the LGA (with the exception of some medium-rise housing in the CBD) with large residential blocks and big backyards supporting an outdoor lifestyle. Green space and community facilities are generally well distributed and contribute to the identity of a well-serviced community with an active lifestyle. 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. However, local communities near the EIS investigation corridor have a more small-town, rural identity influenced by strong connections to agricultural heritage, and a high degree of community cohesion.

A baseline assessment of the Inland Rail corridor as whole (MSG, 2017) noted that many of the communities along the proposed alignment are undergoing substantial intergenerational change with ramifications including:

- Loss of rural youth to regional centres or capital cities
- Purchase and amalgamation of family farms by large corporations, which can be disruptive to communities and to the industries that rely upon them
- Influx of young families who are being priced out of housing markets in capital cities and regional centres
- Cumulative impacts due to the delivery of other major infrastructure or mining and extractive industry projects.

These factors are likely to be relevant to communities near the EIS investigation corridor.

### **5.3.5 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).

Aboriginal 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.

People who have lived in the area for a long time also have a strong sense of place, imbued by what the place has meant to them and their families, and their knowledge of the area’s physical and environmental attributes. Sense of place in the SIA study area includes having 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 to social elements such as relationships between community members and places.

Community values described by survey respondents from the Lockyer Valley LGA emphasise the strong value placed on the unique character of local towns and community identity. Representative comments which describe this included:

- “The Lockyer Valley has been home to my family for more than five generations. Although it has grown and diversified ... we still have small town/rural values where we all help each other in times of need. There is crime but mostly it is a safe environment to raise a family. ... They are small picturesque towns and when many small towns are dying out, Laidley (in particular) has come up with unique businesses to keep bringing visitors to our valley”.
- “Lockyer Valley now has two rated Tidy Towns - Helidon and Forest Hill ...this is not just for rubbish; it is about a community - how it involves itself with others and the history. We have a beautiful rural lifestyle with community infrastructure locally.”

Factors of value to sense of place in or near the EIS investigation corridor which were identified through discussion with residents at community information sessions include:

- Visual connections to the mountain range and peaks, and vistas across the plains
- 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.

### 5.3.6 Community values

The SIA community survey undertaken from May to July 2018 asked respondents to respond to a series of value statements regarding their community’s values (Figure 5-2).

Scores were based on a scale of 1= strongly disagree; 2 = disagree; 3= neutral; 4= agree; and 5=strongly agree. The weighted average responses from residents of Lockyer Valley and Ipswich LGAs are shown in Figure 5-2. The weighted average of total survey responses (n=342) are provided for comparison.

Respondents from the Lockyer Valley LGA (n=64) mostly agreed that their community was family oriented and a community that sticks together when times are tough (both receiving an agreement rating of 4.3 out of 5).

Respondents from the Ipswich LGA agreed more strongly that their community was one that sticks together when times are tough (4.3) and a safe community with a strong sense of identity (each rated at 4.2).

Consistent with responses from the Lockyer Valley LGA, Ipswich LGA respondents disagreed most with the statement that their community had the ability to adapt to change (with respective ratings of 2.9, 3 and 2.8).

Community values described by respondents of the Ipswich LGA sample are captured in the following comments, which demonstrate values in family and community safety, the peace and quiet, local wildlife, picturesque landscapes and rich cultural heritage of the area:

- “Wildlife, aboriginal heritage, open plan living, ability to be able to bring my children up without any inner suburban pollution. Sound of nature at its finest.”

- “Certain way of life - rural residential and room to move, great for kids, safe, we're on an acre and a quarter, we have pets, we don't live on top of one another, we have space.”
- “Our community is very service orientated. We all do our part to make the district a safe and enjoyable place to live. It is a place where families enjoy a peaceful lifestyle and strong community spirit.”
- “Grandchester is a special place to live ... beautiful rural area, only an hour from the capital city. People who live here regard this little township as a bolt hole away from the hustle and bustle of their work life. Work/life balance is so easy to achieve when home is in such a calm, pretty place.”

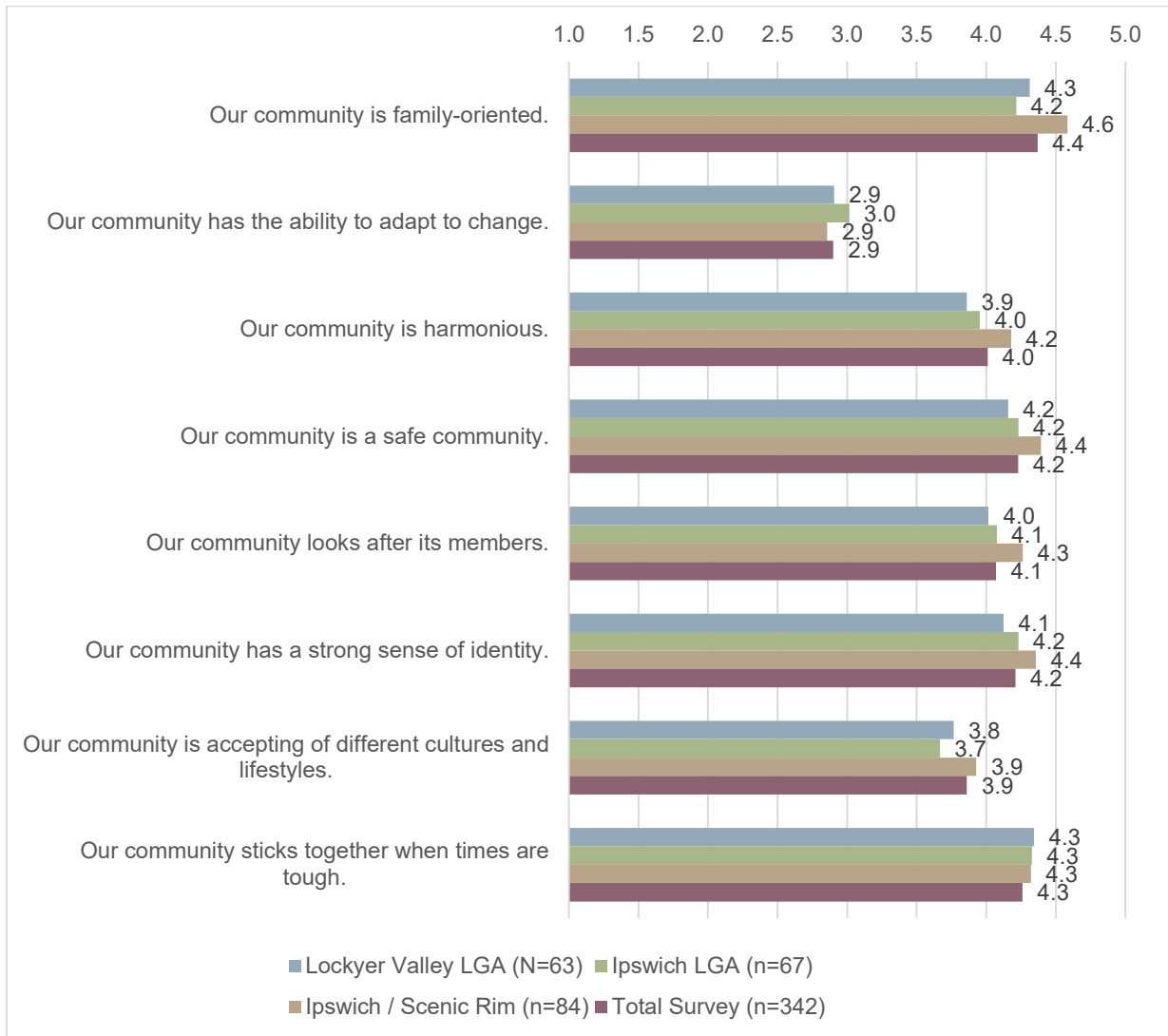


Figure 5-2 SIA study area community values



## 5.4 Employment, business and industry

### 5.4.1 Employment and labour

#### Labour force

In 2016, the SIA study area had a total workforce of approximately 100,047 people, of whom 15,762 people (15.8 per cent) lived in the Lockyer Valley LGA and 82,285 people (84.2 per cent) lived in the Ipswich LGA (refer Table 5-20). The largest industry of employment by number of workers in the Locker Valley LGA was agriculture, forestry and fishing (2,177 people) followed by health care and social assistance (1,542 people), education and training (1,441 people), retail trade (1,428 people) and construction (1,307 people).

In the Ipswich LGA, the five largest industries by number of workers were health care and social assistance (11,091 people), public administration and safety (7,647 people), manufacturing (8,425 people), retail trade (8,839 people) and construction (7,049 people).

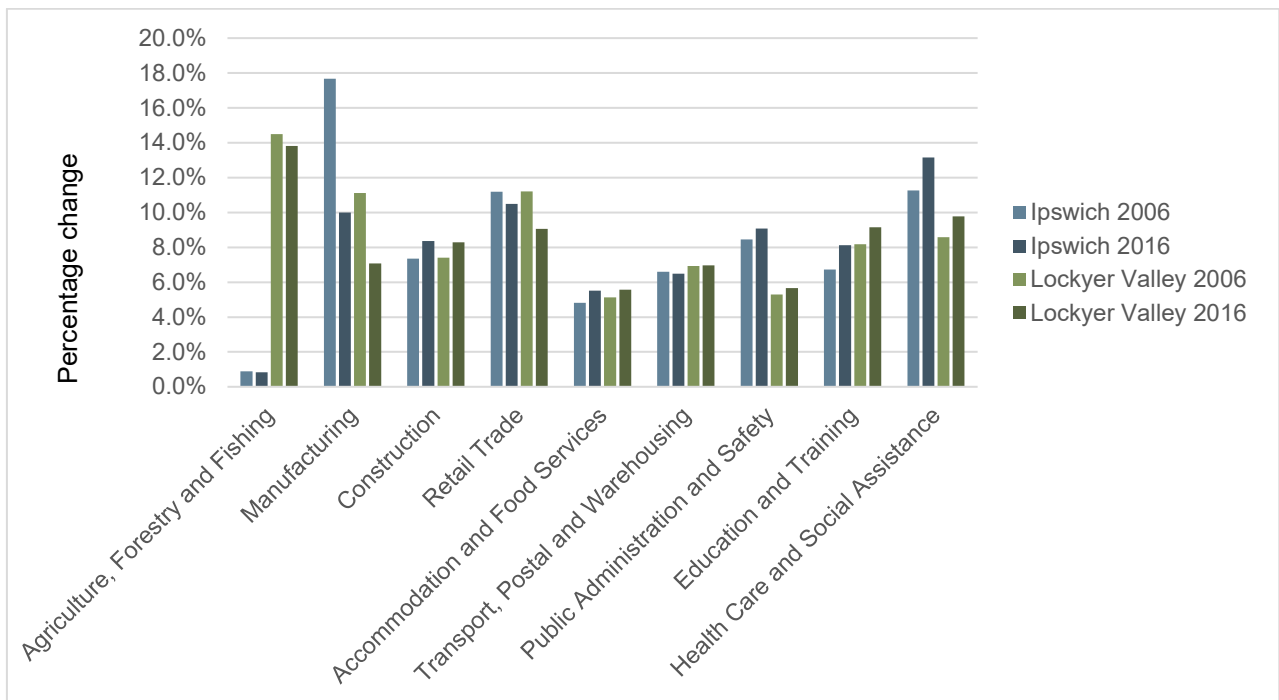
**Table 5-20 Industry of employment, number by industry, 2016 – SA4, LGA and SIA study area (number of people)**

Industry of employment	LGA		SA4		Total
	Ipswich	Lockyer Valley	Ipswich	Toowoomba	
Agriculture, Forestry and Fishing	697	2,177	2,965	2,965	2,874
Mining	754	211	1,065	1,065	965
Manufacturing	8,425	1,114	4,313	4,313	9,539
Electricity, Gas, Water and Waste Services	1,060	218	741	741	1,278
Construction	7,049	1,307	5,735	5,735	8,356
Wholesale Trade	2,714	455	1,979	1,979	3,169
Retail Trade	8,839	1,428	6,531	6,531	10,267
Accommodation and Food Services	4,655	879	4,206	4,206	5,534
Transport, Postal and Warehousing	5,464	1,098	2,803	2,803	6,562
Information Media and Telecommunications	884	96	516	516	980
Financial and Insurance Services	2,099	205	1,836	1,836	2,304
Rental, Hiring and Real Estate Services	1,384	199	1,022	1,022	1,583
Professional, Scientific and Technical Services	3,697	592	3,101	3,101	4,289
Administrative and Support Services	2,862	465	1,736	1,736	3,327
Public Administration and Safety	7,647	891	4,432	4,432	8,538
Education and Training	6,846	1,441	7,615	7,615	8,287
Health Care and Social Assistance	11,091	1,542	10,028	10,028	12,633
Arts and Recreation Services	826	142	651	651	968
Other Services	3,324	586	2,807	2,807	3,910
Inadequately described/Not stated	3,969	719	2,310	2,310	4,688
<b>Total</b>	<b>84,285</b>	<b>15,762</b>	<b>135,965</b>	<b>135,965</b>	<b>100,047</b>

Source: ABS, 2016f

Analysis of changes in employment in industries with more than five per cent of either LGA’s workforce in between 2006 and 2016 shows (Figure 5-3):

- The agriculture forestry and fishing industry was the Lockyer Valley’s largest employer, with 13.8 per cent of the workforce in 2016, down slightly from 14.5 per cent in 2006
- Manufacturing was Ipswich’s largest industry in 2006 with 17.7 per cent of the workforce, but this percentage decreased to 10.0 per cent in 2016, and manufacturing was surpassed by Health Care and Social Assistance as the largest employing industry in 2016
- The percentage of the workforce employed in construction had increased from 7.4 per cent to 8.4 per cent in the Ipswich LGA and from 7.4 per cent to 8.3 per cent in the Locker Valley LGA
- Percentages of retail trade workers decreased slightly over the ten years in both LGAs, but employed 9.1 per cent of Lockyer Valley LGA’s workforce and 10.5 per cent of Ipswich LGA’s workforce in 2016
- The percentage of the workforce employed in accommodation and food services was similar at 5.6 per cent in Locker Valley and 5.5 per cent in Ipswich LGA, with little change over the ten years
- Percentages of people employed in the transport, postal and warehousing industry decreased slightly in Ipswich (from 6.6 per cent to 6.5 per cent) and increased slightly from 6.9 per cent to 7.0 per cent in Lockyer Valley LGA
- Public administration and safety workforce was strong in Ipswich at 9.1 per cent, compared to 5.7 per cent in the Locker valley LGA in 2016
- The percentage of the workforce employed in education and training, and health care and social services, increased in both LGAs between 2006 and 2016.



**Figure 5-3 Change in largest industry sector employment, 2006 – 2016 – Local Government Area**

## Occupation

The SIA study area’s occupation profile (Table 5-21) indicates a higher representation of trades, machinery and labourer occupations, while the representation of professionals and managers is low, compared with Queensland.

Labourers are the most highly represented group in the Lockyer Valley LGA at 18.4 per cent of the workforce, compared with 12.9 per cent in Ipswich and 10.5 per cent in Queensland. Machinery operators and drivers represent 10.5 per cent of the workforce in the Lockyer Valley LGA and 10.1 per cent in Ipswich LGA compared with 6.9 per cent in Queensland. Technical and trade workers are also somewhat more highly represented at 15.4 per cent in Ipswich LGA and 15.2 per cent in Lockyer Valley LGA, compared with 14.3 per cent in Queensland.

Managers represent 12.9 per cent of the workforce in the Lockyer Valley, similar to Queensland at 12.1 per cent, but are significantly less in Ipswich at 9.2 per cent, while the representation of professions in both LGAs are significantly lower than in Queensland (14.8 per cent in Ipswich and 12.0 per cent in Lockyer Valley compared with 19.8 per cent in Queensland).

**Table 5-21 Occupational groups, 2016 – LGA (percentage)**

Occupation	LGA		QLD (% of total)
	Lockyer Valley (% of total)	Ipswich (% of total)	
Managers	12.9	9.2	12.1
Professionals	12.0	14.8	19.8
Technicians and trades workers	15.2	15.4	14.3
Community and personal service workers	10.8	13.0	11.3
Clerical and administrative workers	11.7	14.9	13.6
Sales workers	8.6	9.8	9.7
Machinery operators and drivers	10.5	10.1	6.9
Labourers	18.4	12.9	10.5

Source: ABS Census 2016

## Unemployment

Table 5-22 provides a view of labour force size and unemployment at the State Suburb level, using data from Census 2016. Not surprisingly the largest labour force was concentrated in the main centres of Gatton (3,203 people) and Laidley (1,226 people).

Unemployment levels are especially high in Lawes (31.5 per cent) which is likely to reflect the student population there. Laidley North, Laidley and Helidon also have relatively high levels of unemployment relative to Queensland (at 14.5 per cent, 11.5 per cent and 10.3 per cent, compared with 7.6 per cent for Queensland).

**Table 5-22 Unemployment, 2011 and 2016 – State suburb (number and percentage)**

Area	Total labour force (number)		Unemployment (% of labour force)	
	2011	2016	2011	2016
Calvert	119	138	7.6	5.8
Forest Hill	309	460	6.8	7.4
Gatton	3,203	3,179	7.2	9.3
Grandchester	200	206	7.0	3.9
Grantham	216	266	3.2	6.8
Helidon	448	458	5.4	10.3
Helidon Spa	295	257	8.1	7.8
Laidley	1,226	1,303	10.0	11.5
Laidley North <sup>^</sup>	-	200	-	14.5
Lawes	106	92	23.6	31.5
Placid Hills	447	447	2.2	4.7
<b>Queensland</b>	-	-	6.1	7.6

Note: ^ Data not comparable between Census periods due to boundary changes

Source: ABS, 2016a

Unemployment levels in the SIA study area in 2016 were higher than for the State, sitting at 9.0 per cent in the Ipswich LGA and 8.1 per cent in the Lockyer Valley LGA, compared with 7.6 per cent in Queensland (refer Table 5-23). Unemployment also increased between the 2011 and 2016 Census periods across the region. A similar pattern is evident in the broader SA4 region.

**Table 5-23 Unemployment, 2011 and 2016 – LGA, SA4 and Queensland (percentage of labour force)**

Location	2011 (% of labour force)	2016 (% of labour force)
<b>LGA</b>		
Ipswich	7.2	9.0
Lockyer Valley	6.5	8.1
<b>Total</b>	7.1	8.8
<b>Statistical Area 4 (SA4)</b>		
Ipswich	7.1	8.9
Toowoomba	5.0	7.0
<b>Total</b>	6.4	8.3
<b>Queensland</b>	6.1	7.6

Source: ABS, 2011a and 2016a

Youth unemployment was very high across Queensland at 15.8 per cent of the labour force in 2016, and as shown in Table 5-24, it was especially high in the Ipswich LGA at 19.3 per cent, but occurring at similar levels to the State in the Lockyer Valley LGA at 15.7 per cent.

Indigenous unemployment rates across Queensland were even higher in 2016 at 20.1 per cent. Indigenous employment is slightly below the State rate at 19.9 per cent in the Ipswich LGA and 18.9 per cent in the Lockyer Valley. These data differ marginally from data provided by DATSIP (Section 5.2.3) due to different methodologies used.

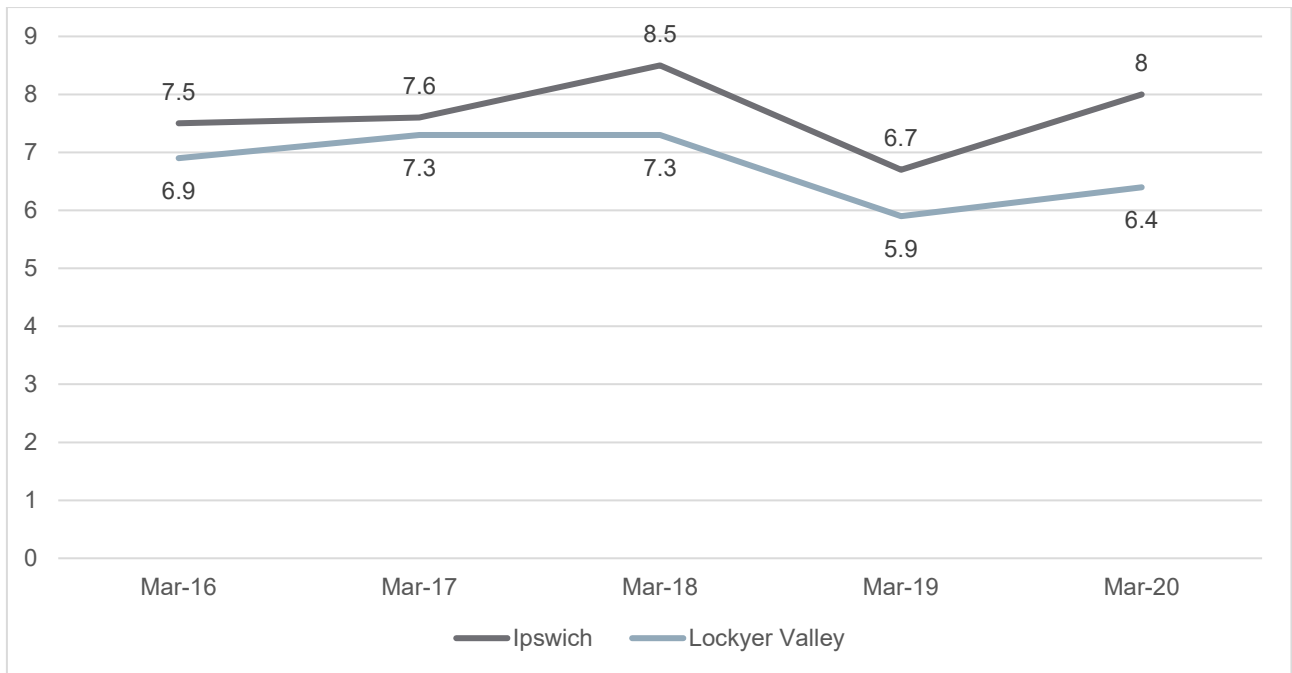
A higher percentage of females were unemployed, compared to males, in both the Ipswich LGA (9.2 per cent female compared with 8.8 per cent male) and Lockyer Valley LGA (8.4 per cent female compared with 7.9 per cent male).

**Table 5-24 Unemployment by population cohort, 2016 – LGA, SA4 and Queensland (number and percentage)**

Location	Indigenous	Youth (15-24 years)	Male	Female
<b>LGA</b>				
Ipswich (Number)	309	3,375	4,282	4,032
Ipswich (%)	19.9	19.3	8.8	9.2
Lockyer Valley (Number)	83	483	709	681
Lockyer Valley (%)	18.9	15.7	7.9	8.4
<b>Statistical Area 4</b>				
Ipswich (Number)	857	5,195	6,939	6,430
Ipswich (%)	20.2	19.3	8.8	9.1
Toowoomba (Number)	390	2,015	2,728	2,296
Toowoomba (%)	19.5	15.1	7.4	6.7
<b>Queensland (%)</b>	<b>20.1</b>	<b>15.8</b>	<b>7.8</b>	<b>7.4</b>

Source: ABS, 2011a and 2016a

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, decreased during 2018 but increased again during 2019 to reach 8.0 per cent in March 2020 (the most recent data available) - an increase of 0.5 percentage points over the five years (refer to Figure 5-4). The unemployment rate in the Locker Valley LGA has improved from a rate of 6.9 per cent in March 2016, with the most substantial decreases occurring during 2018-2019 to reach a rate of 5.9 per cent in March 2019, then increasing to 6.4 per cent in March 2020, a decrease of 0.5 percentage points over the five years.



**Figure 5-4 Unemployment rate in Ipswich and Lockyer Valley LGAs (percentage) March 2016 – March 2020**

Source: DESE, 2020.

At March 2020, 9,148 Ipswich LGA residents were unemployed (up by 1,803 people since March 2019), and in Lockyer Valley there were 1,178 unemployed residents in March 2020 (up by just 16 people since March 2019). In total at March 2020, there were 10,326 unemployed people in the project region (DESE, 2020).

**5.4.2 Tourism**

Lockyer Valley and Ipswich residents have easy access to national parks which are significant generators of day trip tourism and are integral to scenic amenity. Key tourism attractions near the EIS investigation corridor include:

- Helidon Natural Springs
- Lockyer National Park
- Little Liverpool Range, which is a valued wildlife corridor and bushwalking attraction
- Lockyer Valley Cultural Centre
- Lake Apex and Freeman Parkland Gatton Showground and Indoor Equestrian Centre
- Gatton Golf Course and Gatton Jubilee Golf Club
- The heritage-listed UQ Gatton Campus, and Darbalara Farm
- Forest Hill Post Office, Gift Shop and Café 4342
- Laidley Cultural Centre
- Branell Homestead Bed and Breakfast
- Cunningham Crest Outlook



- McKeons Lagoon (local water hole) within Calvert township
- Spicers Hidden Vale.

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). The same data for the Lockyer Valley LGA indicate an increase in the number of visitor nights between 2015/2016 and 2018/2019 of 81.2 per cent, indicating substantial increases in demand for tourism accommodation over this period (Ibid).

The Lockyer Valley Country Music Week is a key event which has been held variably in February, March or November during the past few years and was held in late February to early March in 2020. Laidley Showgrounds is the hosting facility and offers caravan and camping sites for the event. 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.

Key opportunities identified in the Lockyer Valley Tourism Destination Plan 2018 – 2023 (LVRC/Stafford Strategy, 2018) were focused on established strengths such as agri-tourism, sports-based tourism and nature-based recreational tourism. The plan notes that:

- The current tourism accommodation stock lacks diversity and is of a relatively small scale, unable to accommodate large volumes of visitors or large-scale conferences/events
- The months of March, September and October have a higher concentration of events scheduled, including primarily cultural events and truck/car-related events
- Events designated as major events by LVRC would primarily still draw a local rather than broader regional crowd.

The Ipswich Motorsport Precinct (which is located near Inland Rail's C2K project) is a major tourist drawcard which is generally activated year-round, with event calendars changing on an annual basis. Major events include CMC Rocks (a music festival which was scheduled for March in 2020 but cancelled), the Ipswich Sprint as part of the Supercars Championship (not scheduled for 2020) and the Touring Car Championships events (previously scheduled during March, May, June, July, September and October in 2020, but with many events cancelled or rescheduled during 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.

During 2020, COVID-19 restrictions have resulted in disruption to events, removing a major source of business for local tourism providers, and ongoing restrictions may see the capacity of these events reduced in the future. Whilst travel outside Queensland is currently restricted, intra-Queensland tourism may result in an increase in demand during 2020-2021, but this can't be predicted with any certainty.

### 5.4.3 Business capacity to supply Project

Table 5-25 and Table 5-26 show registered businesses by industry and employment size respectively in the Ipswich and Lockyer Valley LGAs. In 2016-2017 the largest industry (as indicated by numbers of businesses) within the Lockyer Valley LGA was agriculture, forestry and fishing (27.7 per cent of all businesses), followed by construction (17.6 per cent), and transport postal and warehousing (9 per cent).

By contrast, the most highly represented industries within the Ipswich LGA were construction (27.0 per cent), followed by transport, postal and warehousing (14.9 per cent). Professional, scientific and technical services and rental, hiring and real estate services were also well represented at 12.2 per cent and 10.5 per cent respectively.

**Table 5-25 Registered businesses by industry, 2016-17 – by LGA (number and per cent)**

Type of Industry	Ipswich		Lockyer Valley		Ipswich 2017	Lockyer Valley 2017
	2015	2017	2015	2017	(% of total)	
Agriculture, Forestry and Fishing	365	369	862	847	5.3	27.7
Mining	19	24	14	14	0.3	0.5
Manufacturing	479	484	129	124	7.0	4.1
Electricity, Gas, Water and Waste Services	36	30	4	7	0.4	0.2
Construction	1,682	1,868	487	538	27.0	17.6
Wholesale Trade	205	219	84	88	3.2	2.9
Retail Trade	554	568	159	163	8.2	5.3
Accommodation and Food Services	307	338	73	70	4.9	2.3
Transport, Postal and Warehousing	877	1,029	275	276	14.9	9.0
Information Media and Telecommunications	43	56	3	4	0.8	0.1
Financial and Insurance Services	429	491	119	130	7.1	4.3
Rental, Hiring and Real Estate Services	661	729	210	234	10.5	7.7
Professional, Scientific and Technical Services	775	843	184	189	12.2	6.2
Administrative and Support Services	357	410	83	97	5.9	3.2
Public Administration and Safety	31	24	6	5	0.3	0.2
Education and Training	109	140	19	19	2.0	0.6
Health Care and Social Assistance	484	566	60	66	8.2	2.2
Arts and Recreation Services	119	121	25	31	1.8	1.0
Other Services	498	522	137	141	7.5	4.6
Currently Unknown	92	96	20	22	1.4	0.7
<b>Total</b>	<b>6,112</b>	<b>6,914</b>	<b>2,952</b>	<b>3,053</b>	<b>100.0</b>	<b>100.0</b>

Source: ABS 2017b

In both the Lockyer Valley and Ipswich LGAs, the majority of businesses employed no staff (65.2 per cent and 61.5 per cent respectively), indicating a high presence of sole operators, including famers. The next main group were small businesses employing less than 20 people (36.6 per cent in the Ipswich LGA and 36.2 per in the Lockyer Valley). Only a minority of businesses employed more than 20 people (2.2 per cent in each LGA).

**Table 5-26 Registered businesses by employment size, 2016-2017 – by LGA (number and percentage)**

LGA	Non-employing	1-19 Employees	20-199 Employees	200+ Employees	Total
<b>Number</b>					
Lockyer Valley	1,990	996	65	3	3,053
Ipswich	5,478	3,230	200	4	8,914
<b>Total</b>	<b>7,468</b>	<b>4,226</b>	<b>265</b>	<b>7</b>	<b>11,967</b>
<b>Percentage of total</b>					
Lockyer Valley	65.2	32.6	2.1	0.1	100
Ipswich	61.5	36.2	2.2	0.0	100
<b>Total</b>	<b>62.4</b>	<b>35.3</b>	<b>2.2</b>	<b>0.1</b>	<b>100</b>

Source: ABS 2017b

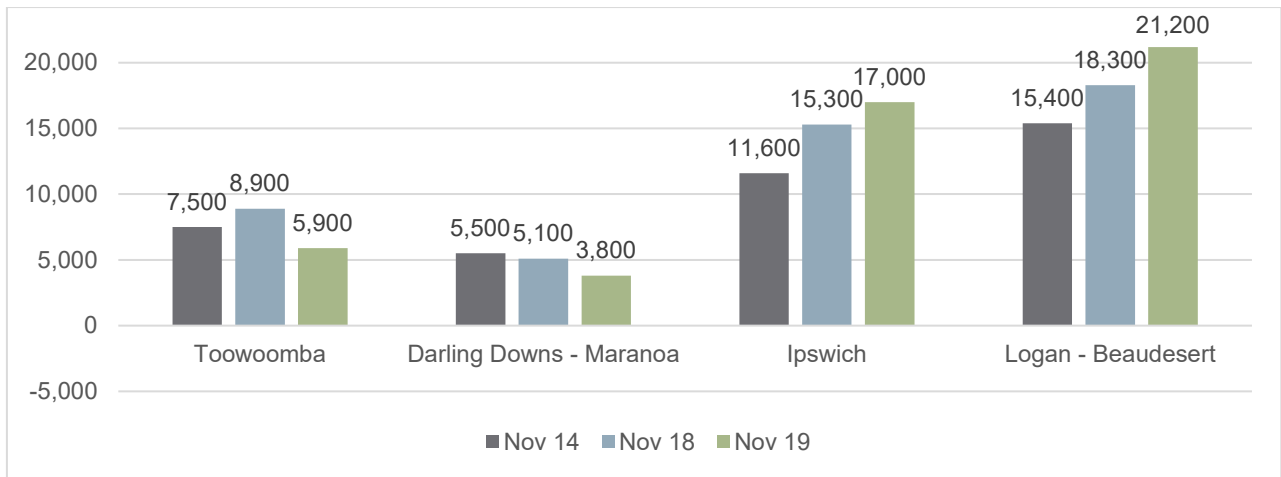
#### 5.4.4 Labour availability

There is limited data available on the availability of construction labour in the Project region. ARTC is working with Construction Skills Queensland (CSQ) to identify potential shortages in trades and professions that will be required for construction of the Project and other projects in Inland Rail. This will inform the development of Inland Rail training and development programs, which are described in Section 7.2.2

Analysis of changes in construction industry employment sheds some light on the availability of construction industry employees (refer Figure 5-5). In the Toowoomba SA4, 3,000 fewer people were employed in the construction industry in 2019 than in 2018 which was largely due to the completion of construction of the Toowoomba Bypass. The number of people employed in construction in the Toowoomba SA4 was 1,600 lower (21.0 per cent) than in 2014, indicating the likelihood of latent capacity for construction labour within the SA4.

A similar trend was seen in the Darling Downs -Maranoa SA4 (immediately west of the Toowoomba SA4), with 1,300 less people employed in construction over the one-year period, and 1,700 fewer people over the five year period (a decrease of 30.1 per cent).

The Ipswich SA4 saw significant increases in construction employment with an additional 1,700 people employed over the one-year period and 5,400 people over the five-year period, an increase of 46.5 per cent. The Logan- Beaudesert SA4 also saw significant increases in construction employment, with an additional 2,900 people employed in construction over the one-year period and an additional 5,800 people (equivalent to an increase of 37.6 per cent) over the five-year period. These trends indicate a substantial construction labour pool exists in the Ipswich and Logan-Beaudesert SA4 regions.



**Figure 5-5 Construction employment numbers, Selected SA4 regions, 2014-2019**

Source: Australian Government Labour market information portal ABS Labour Force Region - SA4 Data Nov 2019 <http://lmip.gov.au/default.aspx?LMIP/Downloads/ABSLabourForceRegion>

The Australian Department of Jobs and Small Business (DJSB) produces list of occupations for which shortages or some recruitment difficulty is evident. This information is Queensland-wide rather than region-specific but provides insights into the likely ease of accessing particular skills for those occupations analysed by DJSB. The latest list produced for Queensland was for the year 2017-18. Occupational reports for skill categories relevant to the construction sectors are shown in Table 5-27 and indicate that companies and projects were expecting some difficulties in recruitment. A ‘shortage’ is defined when employees are unable to fill or have considerable filling vacancies, whilst regional shortages indicate that businesses outside the major centres had difficulty filling vacancies.

Key areas of shortage potentially relevant to construction include civil engineering professionals and plumbing and gas fitting trades.

**Table 5-27 Skill shortages, Queensland, 2018**

Occupational group	Labour market rating
<b>Structural Steel and Welding trades workers</b>	No shortage, but insufficient welder vacancies to determine a state rating
<b>Fitters</b>	No shortage
<b>Civil engineering professionals</b>	Shortage
<b>Sheet metal trades workers</b>	Mixed indicators, with most vacancies filled but supply to the occupation falling
<b>Painting trade workers</b>	Regional Shortage
<b>Plumbing and gas fitting trades</b>	Regional shortage

Source: Australian Department of Employment, 2018

At the national level, the AI Group Construction Outlook November 2018 Survey (Australian Industry Group and Australian Constructors Association 2018a) found that the construction industry was experiencing widespread and increasing difficulties in sourcing skilled labour and materials. Respondents were not expecting this situation to ease, with continued growth in the construction sector forecast into 2019/20, and strong growth prospects in transport infrastructure and civil works projects. Respondents to AI Group’s Workforce Development Needs Survey listed construction trades workers, electricians and mechatronics/automation trades workers as the top three job roles experiencing skill shortages (Australian Industry Group 2018b).

In March 2020, there were 9,148 Ipswich LGA residents and 1,178 Lockyer Valley residents who were unemployed for a total of 10,326 job seekers in the Project region (DESE, 2020). Between March 2020 and June 2020, the number of Ipswich LGA residents receiving Jobseeker or Youth Allowance increased from 11,400 to 18,485 people (an increase of 62.1 percent) whilst the number of Lockyer Valley residents receiving these benefits increased from 1,903 to 2,940 people (an increase of 54.5 percent) 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 significantly higher than in previous years.

#### **5.4.5 Training and Employment Policies**

Government training and employment strategies and programs are summarised below. A number of the training strategies offered as part of these programs are market driven, with needs identified and addressed as they emerge. ARTC will consult with DESBT to identify opportunities to align Inland Rail's workforce training and development initiatives with the Queensland Government's jobs, skills and workforce diversity programs.

#### **Regional Skills Investment Strategy**

The Regional Skills Investment Strategy (RSIS) is a DESBT initiative funded over four years. RSIS will support regional communities to identify current and emerging jobs in key industries, and ensure local people are supported to develop the skills to meet this demand (Queensland Government. 2019a).

Both ICC and LVRC are participating in the RSIS. In the Ipswich LGA, the identified priorities for skills development have been identified in advanced manufacturing, defence industries, and transport and logistics. In the Lockyer Valley LGA, the identified priorities are the agriculture, construction and hospitality industries.

ARTC has commenced consultation with the RSIS coordinators in each Council, towards alignment of Inland Rail training initiatives with RSIS strategies.

#### **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. 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.

The Project's Contractor will determine the applicability and utilisation of Jobs Queensland programs as part of its workforce development and training plans.

### **Skilling Queenslanders for Work**

Skilling Queenslanders for Work (SQW) (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, Aboriginal and Torres Strait Islander 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 SQW includes:

- Community Work Skills, which delivers tailored support and assistance to 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.

ARTC has engaged with ICC and LVRC regarding the potential for joint applications for SQW projects as described in Section 7.2.3.

### **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 will 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.

The Project's Principal Contractor will determine the applicability and utilisation of Back to Work package programs as part of its workforce development and training plans.

### **Workforce diversity**

The Queensland Women's Strategy 2016-21 (DCDSS 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 Aboriginal and Torres Strait Islander education and training**

The former Department of Education and Training released an 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 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.

ARTC has a commitment to ensuring Indigenous people are able to access Project-related training and employment (refer to Section 8.3.3) and will require its Principal Contractor to set goals for Indigenous participation in employment and report on progress towards those goals.

## 5.5 Housing and accommodation

This section outlines the SIA study area's housing stock, including housing type and tenure, rental vacancy rates, social housing and homelessness, trends in housing costs, building approval trends, and the availability of short-term accommodation in the SIA study area.

### 5.5.1 Housing access

#### Occupied and unoccupied dwellings

In 2016 there were 87,653 private dwellings in the SIA study area, the majority of which (72,741 dwellings) were located in the Ipswich LGA (refer Table 5-28). Most private dwellings in the SIA study area were occupied, with the level of unoccupied dwellings below the Queensland average (10.6 per cent) and at similar levels in both the Lockyer Valley and Ipswich LGAs (6.4 per cent and 6.9 per cent respectively).

Within the SA2s, Gatton SA2 recorded a slightly higher percentage of unoccupied private dwellings (7.0 per cent) compared to Lockyer Valley – West SA2 (6.7 per cent), Lockyer Valley – East SA2 (5.9 per cent) and Rosewood SA2 (6.6 per cent). At the State suburb level, Grantham recorded the highest percentage of unoccupied private dwellings (12.4 per cent), followed by Grandchester (9 per cent).

**Table 5-28 Dwelling occupancy, 2016 – SSC, SA2, LGA and Queensland (number and percentage)**

Location	Total private dwellings (number)	Occupied (% of total)	Unoccupied private dwellings (% of total)
Calvert	121	94.2	5.8
Forest Hill	485	95.5	4.5
Gatton	2,905	92.9	7.1
Grandchester	177	91.0	9.0
Grantham	266	87.6	12.4
Helidon	446	92.8	7.2
Helidon Spa	179	93.5	6.5
Laidley	1,632	92.5	7.5
Laidley North	159	95.0	5.0
Lawes	20	100.0	0.0
Placid Hills	286	95.8	4.2
<b>Total</b>	<b>6,497</b>	<b>93.0</b>	<b>7.0</b>
<b>Statistical Area 2 (SA2)</b>			
Gatton	2,923	93.0	7.0
Lockyer Valley - East	7,696	93.3	6.7
Lockyer Valley - West	4,292	94.1	5.9



Location	Total private dwellings (number)	Occupied (% of total)	Unoccupied private dwellings (% of total)
Rosewood	4,427	93.4	6.6
<b>Total</b>	<b>16,415</b>	<b>93.7</b>	<b>6.3</b>
<b>LGA</b>			
Ipswich	72,741	93.1	6.9
Lockyer Valley	14,912	93.6	6.4
<b>Total</b>	<b>87,653</b>	<b>93.2</b>	<b>6.8</b>
<b>Queensland</b>	n/a	89.4	10.6

Source: ABS, 2016a

### Housing type

Table 5-29 shows that the predominant dwelling type in 2016 within the Lockyer Valley LGA was separate housing, making up 91.4 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 Lockyer Valley LGA, which recorded 2.6 per cent and 1.8 per cent respectively.

The predominant dwelling structure within the SA2s of Lockyer Valley – East, Lockyer Valley – West and Rosewood, was separate housing (94.8 per cent, 94.3 per cent and 92.3 per cent respectively); while Gatton SA2 comprised 78.2 per cent separate houses (compared to 76.6 per cent for Queensland); 8.4 per cent semi-detached (10.6 per cent for Queensland); 6.2 per cent flat or apartment (11.3 per cent for Queensland); and 5.9 per cent other dwellings, including caravans, dwelling attached to shop or office and improvised dwellings (1 per cent for Queensland). Other dwellings were most notable at Forest Hill (20.6 per cent of stock – 99 of 481 dwellings).

Separate houses are the dominant housing type. Within the State Suburbs of Calvert, Laidley North, Lawes, Placid Hills, 100 per cent of housing stock was recorded as separate housing. The availability of medium density housing was limited to Gatton, Laidley and Helidon (Gatton recorded 8.5 per cent of housing stock as semi-detached or townhouse dwellings, and flats or apartments made up 6.2 per cent of housing stock. Laidley recorded 6.7 per cent of housing stock as semi-detached or townhouse dwellings, with flats or apartments making up 3.8 per cent in Helidon and 3.3 per cent in Laidley). These levels are well below the State representation of semi-detached, row or terrace house (10.6 per cent) and townhouse and flat or apartment (11.3 per cent).

**Table 5-29 Dwelling structure (private dwellings), 2016 – SSC, SA2, LGA and Queensland (percentage)**

Location	Separate house (% of total)	Semi-detached, townhouse (% of total)	Flat or apartment (% of total)	Other Dwellings^ (% of total)	Not stated (% of total)	Total (% of total)
Calvert	100.0	0.0	0.0	0.0	0.0	100.0
Forest Hill	78.4	1.0	0.0	20.6	0.0	100.0
Gatton	78.1	8.5	6.2	5.9	1.3	100.0
Grandchester	97.1	0.0	0.0	2.9	0.0	100.0
Grantham	98.9	0.0	0.0	0.0	1.1	100.0
Helidon	92.3	2.9	3.8	0.0	0.9	100.0

Location	Separate house (% of total)	Semi-detached, townhouse (% of total)	Flat or apartment (% of total)	Other Dwellings^ (% of total)	Not stated (% of total)	Total (% of total)
Helidon Spa	67.8	0.0	0.0	32.2	0.0	100
Laidley	85.6	6.7	3.3	3.7	0.7	100.0
Laidley North	100.0	0.0	0.0	0.0	0.0	100.0
Lawes	100.0	0.0	0.0	0.0	0.0	100.0
Placid Hills	100.0	0.0	0.0	0.0	0.0	100.0
<b>Total</b>	<b>84.3</b>	<b>5.8</b>	<b>3.9</b>	<b>5.2</b>	<b>0.9</b>	<b>100.0</b>
<b>Statistical Area 2 (SA2)</b>						
Gatton	78.2	8.4	6.2	5.9	1.3	100.0
Lockyer Valley – East	94.8	1.5	0.8	2.5	0.4	100.0
Lockyer Valley - West	94.3	0.6	0.7	3.2	1.2	100.0
Rosewood	92.3	2.3	1.5	3.5	0.4	100.0
<b>Total</b>	<b>91.6</b>	<b>2.5</b>	<b>1.8</b>	<b>3.4</b>	<b>0.7</b>	<b>100.0</b>
<b>LGA</b>						
Ipswich	88.3	9.0	1.8	0.6	0.3	100.0
Lockyer Valley	91.4	2.6	1.8	3.4	0.8	100.0
<b>Total</b>	<b>88.8</b>	<b>8.0</b>	<b>1.8</b>	<b>1.1</b>	<b>0.4</b>	<b>100.0</b>
<b>Queensland</b>	<b>76.6</b>	<b>10.6</b>	<b>11.3</b>	<b>1.0</b>	<b>0.5</b>	<b>100.0</b>

Note: ^Other Dwelling includes caravan, houseboat, improvised dwelling, dwelling attached to shop or office.

Source: ABS, 2016a

### Housing tenure

Home ownership rates in 2016 were variable across the SIA study area, as shown in Table 5-30. The Lockyer Valley LGA had the highest percentage of properties owned with a mortgage (35.5 per cent compared with 34 per cent in Ipswich LGA and 33.7 per cent in Queensland), and a higher percentage of properties owned outright (29.9 per cent compared with 20.3 per cent in Ipswich LGA and 28.5 per cent in Queensland).

The Ipswich LGA recorded a high percentage of properties that were rented (37.5 per cent), compared to Lockyer Valley LGA (23.1 per cent) and Queensland (34.2 per cent).

Within the SA2s, Gatton had the highest percentage of rented properties (39.3 per cent), while Lockyer Valley – West, Lockyer Valley – East and Rosewood all had higher percentages of properties owned with a mortgage (41.0 per cent, 37.9 per cent, and 37.1 per cent respectively).

Within the State Suburbs, Lawes had the highest percentage of rented properties (79.2 per cent) and no homes owned outright or with a mortgage. This is likely due to the proximity of Lawes to UQ Gatton campus and a high student population. Laidley North and Gatton also had high percentages of rented homes (67.5 per cent and 39.0 per cent). Home ownership rates were highest in Placid Hills (34.5 per cent), Grantham (33.5 per cent) and Grandchester (32.5 per cent).

**Table 5-30 Tenure, 2016 – SSC, SA2, LGA and Queensland (per cent)**

Location	Owned Outright (% of total)	Owned with a Mortgage (% of total)	Rented (% of total)	Other/Not Stated (% of total)	Total (% of total)
Calvert	37.9	40.8	15.5	5.8	100.0
Forest Hill	27.1	20.0	21.0	31.9	100.0
Gatton	29.4	20.9	39.0	10.8	100.0
Grandchester	32.5	40.8	18.9	7.7	100.0
Grantham	33.5	37.0	16.5	13.0	100.0
Helidon	28.0	28.2	30.1	13.7	100.0
Helidon Spa	14.8	43.9	27.0	14.3	100
Laidley	27.0	20.3	36.9	15.8	100.0
Laidley North	14.3	11.7	67.5	6.5	100.0
Lawes	0.0	0.0	79.2	20.8	100.0*
Placid Hills	34.5	49.8	10.5	5.2	100.0
<b>Statistical Area 2 (SA2)</b>					
Gatton	29.1	20.7	39.3	10.9	100.0
Lockyer Valley - East	28.3	37.9	21.1	12.7	100.0
Lockyer Valley - West	33.0	41.0	16.0	10.0	100.0
Rosewood	31.7	37.1	21.5	9.7	100.0
<b>LGA</b>					
Ipswich	20.3	34.0	37.5	8.2	100.0
Lockyer Valley	29.9	35.5	23.1	11.5	100.0
<b>Queensland</b>	28.5	33.7	34.2	3.6	100.0

Source: ABS, 2016a

### Social housing and homelessness

Housing stress is said to occur when low income households (those in the bottom 40 per cent of income distribution) pay more than 30 per cent of their gross household income on housing costs such as mortgage or rent (Torrens University (PHIDU) 2018).

Housing stress and homelessness increase the risk of poor health outcomes and reduce 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.

Housing stress occurs at higher levels in the SIA study area than is typical for Queensland, particularly amongst renters (refer Table 5-31). It is most notable in the Lockyer Valley – East SA2 where 38.8 per cent of low income households are in rental stress, compared with 33.3 per cent in Gatton/Lockyer Valley – West, 31 per cent in Rosewood SA2 and 28 per cent in Queensland (Torrens University (PHIDU), 2018). There is also a higher level of mortgage stress in the Lockyer Valley East SA2 affecting 12.6 per cent of low-income households, while the balance of SIA study area has rates similar to Queensland’s 8.5 per cent. This is likely to be related to the lower levels of socio-economic resources as indicated by SEIFA scores in the SIA study area (refer Section 5.2.7).

**Table 5-31 Housing Stress, 2016 – Statistical Area 2 (percentage of households)**

SA2	Mortgage Stress (% of total)	Rental Stress (% of total)
Boonah/Rosewood	8.9	31.0
Lockyer Valley - East	12.6	38.8
Gatton/Lockyer Valley - West	8.5	33.3
<b>Queensland</b>	8.5	28.0

Source: Torrens University (PHIDU). 2018

Due to the nature of homelessness, the number of homeless people is hard to estimate accurately. Data on homelessness are presented at the SA2 and LGA level in Table 5-32. There was an estimated 858 people experiencing homelessness in the SIA study area at the 2016 Census. Most were identified in the Ipswich LGA (679 people) consistent with the larger population here. However, estimates for homeless people in the Ipswich LGA decreased by 49 people between 2011 and 2016, while estimates in the Lockyer Valley LGA increased by 37 people.

At the SA2 level, 200 people were estimated to be experiencing homeless, an increase of 27 per cent on the previous estimate in 2011. Homelessness was concentrated mainly in the SA2s of Gatton (78 people) and Lockyer Valley – East (63 people). The greatest change at the SA2 level was seen in Gatton, increasing by approximately 22 homeless persons between 2011 and 2016, while Rosewood in Ipswich LGA increased by six people.

**Table 5-32 Homeless Persons, 2011 and 2016 – SA2 and LGA (number)**

Location	LGA	Homeless Persons (Estimate)^		Change
		2011	2016	
<b>Statistical Area 2 (SA2)</b>				
Gatton	Lockyer Valley	56	78	22
Lockyer Valley - East	Lockyer Valley	51	63	12
Lockyer Valley - West	Lockyer Valley	29	31	2
Rosewood	Ipswich	22	28	6
<b>Total</b>		<b>158</b>	<b>200</b>	<b>42</b>
<b>LGA</b>				
Ipswich		728	679	-49
Lockyer Valley		130	167	37
<b>Total</b>		<b>858</b>	<b>846</b>	<b>-12</b>

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

Source: ABS, 2016b

As shown in Table 5-33, in 2016 within the Ipswich LGA, 3.8 per cent of housing (2,594 dwellings) was social housing, compared to 1.2 per cent (174 dwellings) within the Lockyer Valley LGA. Within the SA2s, most social housing was located in Gatton SA2 (2,719 dwellings, equivalent to 4 per cent of housing stock), while social housing made up less than 1 per cent of the stock in the SA2s of Lockyer Valley – East, Lockyer Valley – West, and Rosewood (54 dwellings, 5 dwellings and 23 dwellings respectively). Within the State Suburbs, the percentage of social housing was highest in Lawes (16.7 per cent, or 4 properties), and in Gatton (4 per cent or 107 properties).

**Table 5-33 Social Housing, 2016 – SSC, SA2 and LGA (number and percentage)**

Location	Total dwellings	Social housing <sup>^</sup>	
	No.	No.	% (total dwellings)
Calvert	103	0	0.0
Forest Hill	461	0	0.0
Gatton	2,695	107	4.0
Grandchester	169	0	0.0
Grantham	230	0	0.0
Helidon	415	0	0.0
Helidon Spa	179	0	0.0
Laidley	1,509	51	3.4
Laidley North	154	3	1.9
Lawes	24	4	16.7
Placid Hills	267	0	0.0
<b>Total</b>	<b>6,027</b>	<b>165</b>	<b>2.7</b>
<b>Statistical Area 2 (SA2)</b>			
Gatton	2,719	112	4.1
Lockyer Valley - East	7,233	54	0.7
Lockyer Valley - West	4,004	5	0.1
Rosewood	4,133	23	0.6
<b>Total</b>	<b>18,089</b>	<b>194</b>	<b>1.1</b>
<b>LGA</b>			
Ipswich	67,726	2,594	3.8
Lockyer Valley	13,956	174	1.2
<b>Queensland</b>	<b>1,656,831</b>	<b>61,533</b>	<b>3.7</b>

Note: ^ Defined as rented from State or territory housing authority, housing co-operative, community or church group

Source: ABS, 2016a

### 5.5.2 Housing trends

Recent data on housing trends are provided below for six postcodes aligned to potentially impacted communities.

#### Purchase availability and prices

As shown in Table 5-34, at June 2019, the median asking price for all houses within the key postcode areas ranged from an asking price of \$319,922 (Grantham) to \$398,486 (Grandchester/Calvert). Unit prices ranged from \$220,664 (Placid Hills/Gatton) to \$418,000 (Helidon/Helidon Spa).

A number of postcode areas experienced high price volatility, reflecting the small market where there are fewer listings, and the trend data should be treated with caution, however one-year changes in house prices were generally positive, whilst three year trends were generally negative.

House prices at the LGA level showed steady growth in the Ipswich LGA (rising by 12.7 per cent over the previous five years at an average of 2.5 per cent per year) while the Lockyer Valley LGA prices were relatively steady (rising by just 3.3 per cent over the same period. Unit prices fell by -8.5 per cent over the five-year period to June 2019 in the Ipswich LGA. Due to the small number of unit rentals in the Lockyer Valley LGA, data for units were not available.

**Table 5-34 Median dwelling price (house and units), June 2019 – Post Code and LGA (price and percentage change)**

Postcode^ /LGA*	Suburb	House Price \$	1 Year Change (% of total)	Other Change (% of total)	Unit Price \$	1 Year Change (% of total)	Other Change (% of total)
<b>Postcode^</b>				3-year change			3-year change
4344	Helidon/ Helidon Spa	371,675	13.0	-5.1	418,000	0.0	67.2
4347	Grantham	319,922	22.8	-20.5	360,000	0.0	64.4
4343	Placid Hills/ Gatton	350,020	0.8	-2.1	220,664	-3.8	-6.6
4342	Forest Hill	337,434	6.2	-6.1	244,747	25.5	22.7
4341	Laidley/ Laidley North	362,305	0.0	1.7	225,858	13.3	-5.5
4340	Grandchester/ Calvert	398,486	2.7	3.5	250,333	0.0	0.0
<b>LGA*</b>				5-year change			5-year change
Ipswich		347,000	0.9	12.7	320,00	0.0	-8.5
Lockyer Valley		248,000	-0.8	3.3	n/a	n/a	n/a

Note: There are some suburbs where house prices are quite volatile. This normally occurs in locations where there are fewer listings and/or there is considerable variation between the top end of the market and the bottom end.

Source: ^SQM Research Weekly Asking Prices Index, June 2019 (based on asking price); and

\*REIQ Queensland Marketing Monitor, Issue 43, September 2019, reporting on the June 2019 quarter (based on sales price)

### Rental vacancy rates

At January 2020, there were 131 rental dwellings advertised as vacant in the six postcodes covering the potentially impacted communities (refer Table 5-35). The majority of rental dwellings were in the Laidley/Laidley North and Placid Hills/Gatton postcode areas, with 40 and 65 vacant rental dwellings respectively, whilst other towns had rental pools ranging from three to 16 dwellings. Overall, this was an increase of 18 available rental dwellings between the six postcodes, or an increase of 15.9 per cent, over the 12-month period.

Vacancy rates had increased over the 12 months in the larger rental markets in Laidley/Laidley North and Placid Hills/Gatton. The REIQ considers that a healthy rental market exists when vacancy rates are between 2.5 and 3.5 per cent of rental stock; a weak market when rates are at or above 3.6 per cent, and a tight market when vacancy rates are less than 2.5 per cent (REIQ, 2019:2). On this basis, and acknowledging that the rental pools are relatively small, currently:

- Helidon/Helidon Spa and Forest Hill postcode areas have tight rental markets

- Laidley/Laidley North, Grantham, Grandchester/Calvert postcode area have healthy rental markets
- Placid Hills/Gatton area has a weak rental market.

**Table 5-35 Rental vacancies, January 2019- January 2020 – Postcode (number and percentage)**

Post Code	January 2019		January 2020	
	Vacant Dwellings No.	Vacancy Rate (% of total)	Vacant Dwellings No.	Vacancy Rate (% of total)
4344 (Helidon/Helidon Spa)	4	1.3	3	1.0
4347 (Grantham)	2	1.4	3	2.9
4343 (Placid Hills/Gatton)	34	2.2	65	4.1
4342 (Forest Hill)	3	1.0	4	1.3
4341 (Laidley/Laidley North)	54	3.7	40	2.7
4340 (Grandchester/Calvert)	16	2.5	16	2.5
<b>Total vacancies</b>	<b>113</b>	<b>N/A</b>	<b>131</b>	<b>N/A</b>

Source: SQM Research, accessed 2 March 2020

Larger rental housing markets exist in the regional centres of Ipswich and Toowoomba. At January 2020, the Ipswich central postcode (4305) had approximately 248 vacant rental dwellings, and the Toowoomba central postcode (4350) had approximately 262 vacant dwellings. Of note, rental vacancy rates were low in both these centres at 2.2 per cent and 1.4 per cent respectively in January 2020. Any housing demand from the construction workforce is likely to be shared between these centres and the potentially impacted communities, as discussed in Section 7.3.4.

### Rental cost

Table 5-36 presents the weekly rents index for the key postcode areas in January 2020, showing asking rents that vary from a low of \$276.8 per week (Grantham) to a high of \$351.1 (Forest Hill) for houses, and from \$243.2 per week (Laidley/Laidley North) to \$282.7 per week (Grandchester/Calvert) for units.

The volatility in rental prices across the one- and three-year-time frames is more likely to be a factor of the small size of the rental market and may not be a true reflection of market movement in rental values. As discussed above, rental stock and vacancy rates were low in the postcode area for Helidon/Helidon Spa which may influence asking rents there.

Of note, the Project region regularly accommodates transient farm workers, some of whom utilise rental housing, with others using backpacker, farm stay or short-term accommodation such as hotels and caravan parks, so the availability of rental dwellings fluctuates throughout the year.

**Table 5-36 Median weekly rent, 2020 – Postcode (price and percentage change)**

Post Code <sup>^</sup>	Suburb	House \$/week	1 Year Change (% of total)	3 Year Change (% of total)	Unit \$/week	1 Year Change (% of total)	3 Year Change (% of total)
4344	Helidon/Helidon Spa	326.7	0.5	4.2	-	-	-
4347	Grantham	276.8	-14.3	1.5	-	-	-
4343	Placid Hills/Gatton	299.3	-4.0	-4.2	263.6	-2.2	-3.6
4342	Forest Hill	351.1	1.9	6.8	279.5	55.0	124.0



Post Code <sup>^</sup>	Suburb	House \$/week	1 Year Change (% of total)	3 Year Change (% of total)	Unit \$/week	1 Year Change (% of total)	3 Year Change (% of total)
4341	Laidley/Laidley North	337.0	5.2	7.2	243.2	13.8	16.6
4340	Grandchester/ Calvert	321.2	9.6	6.5	282.7	11.6	-1.4

<sup>^</sup> High volatility is apparent in the past year likely due to price differentials in a small (rural) sales market  
 SQM Weekly Rents Index (Median Weekly Reported Rent) at Jan 2020  
 Source: SQM Research, 2020

### Building approvals

As a major regional growth area, the Ipswich LGA recorded 2,471 new dwelling approvals in 2018-2019, more than twelve times the number recorded in the Lockyer Valley LGA where there were 194 new dwelling approvals (refer Table 5-37). However, among the SA2s, Rosewood recorded the highest number with 157 approvals. Lockyer Valley – East SA2 recorded the next highest number of approvals (112), compared to Lockyer Valley – West (54) and Gatton (28).

**Table 5-37 Dwelling approvals, 2018-2019 – SA2 and LGA (number)**

Location	LGA	New Dwellings No.
<b>Statistical Area 2 (SA2)</b>		
Gatton	Lockyer Valley	28
Lockyer Valley - East	Lockyer Valley	112
Lockyer Valley - West	Lockyer Valley	54
Rosewood	Ipswich	157
<b>Total</b>		<b>351</b>
<b>LGA</b>		
Ipswich		2,471
Lockyer Valley		194
<b>Total</b>		<b>2,665</b>

Source: ABS, 2018

### 5.5.3 Short-term accommodation

#### Provision

Local communities and visitors to the SIA study area have access to a range of short-term accommodation options, as shown in Table 5-38. A range of bed and breakfast options are also located in the Lockyer Valley offering small numbers of rooms or cabins.

**Table 5-38 Short-term accommodation in potentially impacted communities**

Locality	Accommodation establishment	Accommodation Units
Helidon/Helidon Spa	Helidon Natural Springs Spa Resort Motel	80 cabins
	Lockyer Motel	15 rooms
Gatton	Royal Hotel	20 rooms (approx.)
	Commercial Hotel	10 rooms (approx.)
	Rooms Motel	39 rooms

Locality	Accommodation establishment	Accommodation Units
	Gatton Motel	20 rooms
	Gatton Caravan Park	127 cabin and caravan sites, 120 dormitory beds
Laidley	Old Britannia Hotel	10 rooms
	Homestyle Lodge (for seasonal workers)	N/A
	Lake Dyer Caravan Park and Camping Ground	Approximately 20 caravan sites plus camping area
	Branell Homestead	4 homestead rooms, 3 cabins
Grantham	Grantham Farmworkers' Lodge	260 rooms
	Spicers Hidden Vale Resort	34 rooms
Plainland	Porters Plainland Hotel	26 rooms
Total Accommodation Units		668+

The Project's eastern end (Helidon) is located within 20 minutes' drive of Toowoomba, the western end (Calvert) is located within 30 minutes' drive of Ipswich, and the project passes through the Lockyer Valley. The following subsection discusses short-term accommodation availability in the Lockyer Valley, Toowoomba and Ipswich LGAs.

The latest tourism accommodation data provided by the ABS were produced for 2015-2016 (ABS, 2016c) and indicate that at that time, accommodation establishments with at least 15 rooms in the Lockyer Valley, Toowoomba and Ipswich LGAs included:

- In Lockyer Valley LGA, one motel in Gatton (the Gatton Motel) and one in Lockyer Valley West (Lockyer Motel at Helidon), with none recorded in Lockyer Valley East (which represents Laidley and Forest Hill)
- In Ipswich LGA, a total of 10 tourism accommodation establishments with more than 15 rooms including two accommodation establishments in Rosewood, five establishments in Ipswich Central, and one each in the suburbs of Leichardt, North Ipswich and Raceview, with the five city centre establishments providing a total of 280 rooms
- In Toowoomba LGA, 36 hotels, motels and serviced apartment establishments, including one each in the Toowoomba East, Wilsonton, and Highfields SA2s, two each in in the Newton and North Toowoomba-Harlaxton SA2s, three in the Drayton/Harristown SA2, eight in the Toowoomba East SA2 and 16 establishments in Toowoomba - Central SA2.

### Increased supply since 2016

Investment in accommodation facilities in the Project region since 2015-2016 has included development of:

- Rooms Motel (39 rooms) in Gatton
- Porters Plainland Hotel (26 rooms)
- Grantham Farmworkers' Lodge (260 rooms).

These developments were expected to alleviate some of the challenges with farm/seasonal worker accommodation (LVRC/Stafford Strategy 2018). Grantham Farmworkers' Lodge has development approval to expand to 600 rooms, the timing of which is dependent on the owner's commercial decisions and market demand. The Gatton Caravan Park has also been granted a development permit for expansion (refer below).

A new 55 room hotel opened in Toowoomba Central in 2017, and an additional establishment with 102 suites is planned to open in Toowoomba Central in 2020 (HTL Property, 2019).

## Occupancy

Accommodation demand in the Project region fluctuates, with tourism accommodation demands increasing around major events such as Toowoomba's Carnival of Flowers (held in September) which generally attracts more than 250,000 visitors, many of them day-trippers from nearby regions, Lockyer Valley's Country Music Week (held in late February-early March in 2020), CMC Rocks (scheduled for March 2020 but cancelled in 2020), CTM FarmFest (usually held in June in Kingsthorpe but cancelled in 2020), and Queensland-wide events held occasionally in the region (e.g. Queensland PGA Championship which was held in Toowoomba in February 2020).

No ABS occupancy data were available for the Lockyer Valley LGA, however a scan of accommodation availability in the Lockyer Valley on 17 August 2020 found that of the six hotels and motels for which information was available:

- the Rooms Motel in Gatton had sixteen rooms available (of 39 rooms)
- the Royal Hotel in Gatton had seven rooms available (of approximately 15 rooms)
- the Gatton Motel had eleven rooms available of approximately 20 rooms
- the Locker Motel in Helidon had three rooms available, of approximately 15 rooms
- Ten rooms were available at Porters Plainland Hotel (of 26 rooms)
- No rooms were available at Spicers Hidden Vale Resort (of 33 rooms).

This availability totalled 47 vacant rooms (from 148 rooms) which equated to an average occupancy rate for the six establishments of 68.2 per cent, and indicates that the local short-term accommodation market within the Locker Valley LGA would generally have some capacity to service additional demand. Accommodation in Toowoomba and Ipswich would also be within a daily driving distance and is more extensive.

From the ABS data available for 2016 for 27 accommodation establishments in Toowoomba LGA, the 16 establishments in Toowoomba-Central SA2 offered a total of 588 rooms, whilst Toowoomba East SA2's eight establishments had 245 rooms and Drayton-Harristown SA2's three establishments offered a total of 97 rooms. As each of the other establishments had at least 15 rooms each, a minimum total of 1,065 rooms were offered by establishments within the Toowoomba LGA. With the additional 157 rooms to be developed by 2020 (refer above), at least 1,222 short-term accommodation rooms are provided within the Toowoomba LGA. The occupancy rate for Toowoomba-Central SA2 establishments was 58.4 per cent in the June 2016 quarter, and applying this rate to the total number of rooms identified above, approximately 508 vacant rooms would be available.

The Ipswich city centre had a room occupancy rate of 66.0 per cent in 2016, which from an available stock of at least 300 rooms, would see an average of approximately 102 available rooms. A scan of web sites in January 2020 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.

In summary, between the Lockyer Valley, Toowoomba and Ipswich LGAs approximately 600-700 hotel/motel rooms may generally be available from a total of 1,677 rooms provided, based on estimated occupancy rates in the Lockyer Valley, Toowoomba and Ipswich LGAs.

The availability of short-term accommodation in the SIA study area changes in response to community events and the demands relating to major projects. An updated analysis of the availability of short-term accommodation in the SIA study area will be required as part of the Contractor's Accommodation Management Plan (AMP).

### **Seasonal workers' accommodation**

The Lockyer Valley experiences consistent demands for accommodation for seasonal workers in the agricultural industry.

As noted in the Lockyer Valley Economic Development Plan 2018-2023, the agricultural industry undertakes almost year-round planting and harvesting for a range of different crops, which mitigates large seasonal variations in demands for accommodation of seasonal workers (Stafford Strategy, 2018) however fewer crops are harvested during May-July (Labour Solutions Australia, 2020).

The Gatton Caravan Park (the caravan park) is located at 291 Eastern Drive, Gatton, in the Lockyer Valley LGA. The caravan park is owned and operated by a private company and currently provides approximately 127 cabin and caravan sites and six backpackers' dormitories of 20 beds each. The owner has a development permit (issued by LVRC in September 2019) to extend the caravan park's capacity by 33 additional caravan sites.

Preliminary approval has also been provided by LVRC to remove one caravan site and develop a water park, but this is subject to future development applications. Completion of all three phases would see the provision of a total of 159 caravan and cabin sites and 120 non-resident workers' accommodation beds.

With the Gatton Caravan Park currently offering 127 caravan and cabin sites (assumed to accommodate an average of 254 people) and 120 beds provided in dormitories, Grantham Farmworkers Lodge offering 260 beds, and the Homestyle Lodge offering an estimated 60 beds, approximately 694 beds of this type were available in January 2020.

Accommodation for seasonal agricultural workers (e.g. fruit and vegetable pickers) is the key function for the caravan park. Access to the caravan park and consultation with the owner and people staying in the park was sought but not achieved during the SIA process.

If approved, Project works would impact on the caravan park. This is further discussed in Section 7.3.7.

## **5.6 Social infrastructure**

Social infrastructure including childcare, educational facilities, aged care services, health facilities, emergency services, cultural services and recreational facilities are located within or near the EIS investigation corridor. The SIA study area is predominately rural-residential in nature and the majority of these services and facilities are located within the township areas of Gatton and Laidley. It is noted that some larger and more specialised health and recreational facilities are located in Ipswich.

### **5.6.1 Childcare and early education**

As of February 2018, shown in Table 5-39, there were 153 early childhood education and care services in the Ipswich LGA, 70 of which were long day care services. Within the Lockyer Valley LGA, 22 early childhood education and care services were noted in August 2018. Fourteen of these were long day care services (Office for Early Childhood Education and Care, DET, 2018).

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, when compared to the Lockyer Valley LGA.

The closest childcare and early education centres to the Project are:

- Lockyer Valley Early Education Centre in Gatton approximately 600 m south of the alignment near Ch 43.8 km
- Gatton Kindergarten (North St) which is located approximately 360 m from the alignment near Ch 43.2 km
- Little Angels Childcare Centre, which is located approximately 500 m south of alignment, on Victoria Road, Forest Hill near Ch 52.5 km.

**Table 5-39 Childhood education and care services, 2018 – LGA (number)**

LGA	Family day care	Kindergartens	Long day care	School aged care	Limited house care	Total (a)
	Number					
Ipswich	13	27	70	41	0	153
Lockyer Valley	0	4	14	4	0	22

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, DET, 2018

### 5.6.2 Primary and secondary education

Primary and secondary education facilities whose catchments are traversed by the Project footprint are noted in Table 5-40. In 2018, Gatton State School had the largest student profile of the primary schools with 518 enrolments, followed by Laidley District State School with 369 enrolments. Lockyer District State High School was the largest high school within the potentially impacted communities at 1,052 enrolments.

Grandchester State School situated on Schools Road in Grandchester is the nearest school to the Project footprint at approximately 200 m south of the alignment.

The Lockyer District State High School is approximately 1.3 km south of Gatton train station. Laidley State High School is 1.1 km to the west of the alignment boundary. Rosewood High School is located approximately 5 km to the east of interchange at Calvert (Table 5-40).

**Table 5-40 Primary and secondary education facilities, 2018 - LGA (number of enrolments)**

School	Enrolment 2018	LGA	Proximity to the EIS investigation corridor
<b>Primary</b>			
Helidon State School	133	Lockyer Valley	Project alignment traverses catchment
Grantham State School	95	Lockyer Valley	Project alignment traverses catchment
Gatton State School	518	Lockyer Valley	Project alignment traverses catchment
Peace Lutheran Primary School - Gatton	N/A	Lockyer Valley	Project alignment is within Gatton from which a majority of student are drawn
Our Lady of Good Council School - Gatton	N/A	Lockyer Valley	Project alignment is within Gatton from which a majority of student are drawn
Forest Hill State School	143	Lockyer Valley	Project alignment traverses catchment

School	Enrolment 2018	LGA	Proximity to the EIS investigation corridor
Laidley District State School	369	Lockyer Valley	Project alignment traverses northern extent of catchment
St. Mary’s Catholic School Laidley	N/A	Lockyer Valley	Project alignment is within Gatton from which a majority of student are drawn
Grandchester State School	39	Lockyer Valley	Project alignment traverses northern extent of catchment
<b>Secondary</b>			
Centenary Heights State High School	1,658	Lockyer Valley	Small portion of the catchment area covers start of Project alignment near Helidon Spa
Lockyer District State High School	1,052	Lockyer Valley	Project alignment traverses catchment
Laidley State High School	714	Lockyer Valley	Project alignment traverses northern extent of catchment
Rosewood State High School	432	Ipswich	Small portion of the catchment area covers start of Project alignment at Calvert

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, that offers courses in hospitality, nursing, event management, horticulture and beauty (TAFE Queensland, 2018).

TAFE Queensland services are also delivered in Gatton, based at the Lockyer Valley Conference and Function Centre. Courses delivered include certificates in rural operations, agricultural skills (e.g. chemical application), fatigue management, off farm employment, and life skills such as first aid.

UQ operates a large campus in Gatton, within the Lockyer Valley LGA. 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. There are several different on-campus housing options for both students and staff, some of these houses and buildings are located along the southern boundary of the campus, which falls within or directly adjoins the EIS investigation corridor (UQ, 2018).

University of Southern Queensland’s (USQ) main campus is located in Toowoomba, approximately 4.5 km to the south of Toowoomba’s town centre. USQ offers a comprehensive range of degree, diploma and certificate qualifications, supported by on-site residential colleges, a range of student and staff support services and a wide range of facilities and recreational areas (USQ, 2018). USQ also has a campus 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 UQ.

A wider range of community-based and commercial training organisations are also available in the SIA study area, with capacity to offer readiness for work programs, trades training, and skills in areas including business management, rural management and technologies, hospitality management, building and construction, traffic management and safety and first aid.

**5.6.4 Hospital and health services**

Health services in the SIA study area are presented in Table 5-41 and Table 5-42. The EIS investigation corridor is serviced predominately by smaller General Practitioner (GP) clinics (Australian Government, Department of Health (DoH), 2018).

**Table 5-41 Primary health services**

Township	Facility/service	Number practitioners ^
Rosewood	The Lockyer Doctors Rosewood	3
Rosewood	Rosewood General Practice	4
Gatton	Family Health Gatton	5
Gatton	Gatton Medical Centre	2
Gatton	Lockyer Valley Medical Centre	3
Gatton	UQ Healthcare Gatton	Unknown
Laidley	Kambu Medical Centre	4
Laidley	Country Doctors Practice	Unknown
Laidley	Laidley Family Doctors	4
Laidley	The Lockyer Doctors	Unknown

Note: ^Approximate

Source: Australian Government, 2018

Patients who require treatment beyond basic services are sent to Ipswich Hospital, which is a major acute hospital. Ipswich Hospital 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 Government, DoH, 2018).

The median weight time for the Ipswich Hospital’s Accident and Emergency services in the year to June 2019 was 19 minutes, which is similar to the waiting time of 18 minutes experienced at Toowoomba Hospital which is the next nearest regional hospital (Queensland Health, 2019). Wait times for the Gatton and Laidley hospitals are not published.

**Table 5-42 Hospital and health service profile**

Characteristic	Gatton Hospital	Laidley Hospital	Ipswich Hospital
Hospital services	22 beds  Post-operative care, Outpatients, Accident and Emergency, Post-natal Care, Respite; Rehabilitation Services, Palliative Care	15 beds  Emergency, General Acute Care beds, Palliative Care, Transitional Care, Rehabilitation, visiting Specialist services, Outpatients, Antenatal and Postnatal Midwife Clinic	439 beds  All major health specialties, including anaesthetics, emergency medicine, surgery, intensive and coronary care, orthopaedics, obstetrics, paediatrics, palliative care and rehabilitation along with a full range of allied health services
Allied health	Physiotherapy, Rural Mental Health Service, Social Worker, Oral Health, Occupational Therapist	Physiotherapist, Social Worker, Dietician, Occupational Therapist, Oral Health Clinic	Full range of allied health services offered



Characteristic	Gatton Hospital	Laidley Hospital	Ipswich Hospital
Community health	Child Health, Oral Health, Community Mental Health Services, Diabetes Consultant, Well Women's Clinic	Community Nurse, Child Health, Mental Health, Alcohol Tobacco and Other Drugs, Home and Community Care Services, Needle and Syringe Program site	Full range of community health service including Community Health Nurse, Child Health, Mental Health, Alcohol Tobacco and Other Drugs, HACC services, Diabetes Support Service

Source: Queensland Government, DoH, 2018

### 5.6.5 Aged care services

There were several aged care services in both the Ipswich and Lockyer Valley LGA's in 2016, as noted in Table 5-43. The Ipswich LGA had a total of 24 aged care services and 1,318 operational community, residential and transition care places. The Lockyer Valley LGA had six aged care services within the LGA in 2016 and 225 community, residential and transition care places (Australian Government DoH, 2018).

Church of Christ Amaroo Aged Care Service is located adjacent to the south of the EIS investigation corridor in Gatton. The services offered include accommodation for 20 residents, pastoral care and recreational spaces (Aged Care Guide, 2017). Regis Aged Care is also located adjacent to the south of the EIS investigation corridor in Gatton. This facility offers 60 beds, recreational spaces and lifestyle programs (Regis, 2018). Tabeel Lutheran Aged Care Facility is located in Laidley, to the south of the EIS investigation corridor. There are 26 two-bedroom units are the facility and a number of recreational spaces (Lutheran Services, 2018).

**Table 5-43 Aged care services, 30 June 2016 - LGA**

LGA	Aged care services Number	Number of operational places by care type (a)			
		Community care	Residential aged care	Transition care	Total Places
Lockyer Valley	6	6	219	0	225
Ipswich	24	401	881	36	1318

Note: (a) Australian government recurrent funding for the aged-care services in the 12 months ending 30 June. Please note the value of Australian Government funding has been suppressed for a small number of services and not included in Australian funding totals. Users should be aware of this limitation when using these data.

Source: Australian Government DoH, 2018

### 5.6.6 Police, emergency services and justice

Table 5-44 profiles Queensland Police, Ambulance and Fire stations noted in the Ipswich and Lockyer Valley LGAs (QGSO, 2018).

**Table 5-44 Emergency services, June 2018 - LGA**

LGA	Police stations	Ambulance stations	Fire stations	Justice
Lockyer Valley	3	2	4	Gatton Courthouse Toowoomba Courthouse
Ipswich	7	4	6	Ipswich Courthouse

Source: QGSO, 2018

Police and emergency responses to increased demands for service related to the Project will largely be met by the nearest stations. The nearest police stations to the EIS investigation corridor include:

- Helidon Police Station – Turner Street, Helidon

- Gatton Police Station – William Street, Gatton
- Laidley Police Station – Spicer Street, Laidley
- Rosewood Police Station – John Street, Rosewood.

The nearest fire stations to the EIS investigation corridor include:

- Helidon Fire Station – Railway Street, Helidon
- Gatton Fire Station – North Street, Gatton
- Woodlea Fire Station – Woodlands
- Forest Hill Fire Station – Forest Hill
- Laidley Fire Station – William Street, Laidley
- Rosewood Fire Station – John Street, Rosewood
- Grantham Rural Fire Brigade
- Blenheim Rural Fire Brigade.

The nearest ambulance stations to the EIS investigation corridor include:

- Gatton Ambulance Station – Spencer Street, Gatton
- Queensland Ambulance Service – Railway Street, Laidley
- Rosewood Ambulance Station – John Street, Rosewood.

For larger scale emergencies within the EIS investigation corridor, emergency services are provided from Ipswich.

### **5.6.7 Community services and facilities**

Table 5-45 details key community and civic facilities and community support services in the Project's potentially impacted communities.

A wide range of community, church, 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)
- Mercy Family Services, which provides individual, family and community support services
- Vinnies Community Support programs, which provides services to low income individuals and households
- Uniting Care and BlueCare which provide a range of services, particularly for seniors and people with disability
- Liworaji Aboriginal Corporation (a community development organisation) 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.

Key community service providers in the Lockyer Valley LGA include:

- Laidley Crisis Care and Accommodation, providing emergency housing support and services to people who are homeless
- ALARA Queensland Limited – Laidley which provides support and Respite Service for people with disabilities in the Lockyer and surrounding areas
- Anuha, which provides Supported Accommodation and community access services for people with disability
- Blue Care Lockyer which provides care for seniors and people with disability assistance, transport, Community Aged Care Packaged Care
- Gatton and Laidley Meals on Wheels Inc, delivering meals to those in need
- Kambu Aboriginal and Torres Strait Islander Corporation, which promotes Indigenous community wellbeing
- Laidley Community Centre which provides a wide range of services including information, referral and support Activities, events
- Uniting Care Employment Service
- Lockyer Valley Community Disability Association Inc, a support and referral service
- Lives Lived Well New Access Program, which provides easily accessible, free services for people experiencing depression and/or anxiety
- Rural Financial Counselling Service Southern Queensland which provides free and confidential financial assessments for rural small business.

There is no current published information regarding the current adequacy of various service types to meet 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) and changes to Commonwealth and State government funding decisions. Consultation participants did not identify any specific community service deficits, however increased demand on mental health and financial support services were identified as the result of flooding events and drought. Consultation with the Darling Downs and West Moreton Primary Health Network (PHN) indicated that local support services have capacity to assist local residents experiencing stress related to the Project, which is being supplemented by ARTC (refer Section 8.1.4).

**Table 5-45 Community and civic and support services**

Location	Community and Civic Facilities and Services	Community and Family Support
Helidon	Helidon and District Community Centre	T.R.U.S.T Support and Understanding for Today's Truckies Inc Helidon and District Progress Association Helidon Hills Smokespotters
Grantham	Grantham Butter Factory	Lockyer Ladies Social Network
Placid Hills	-	NTDL Youth

Location	Community and Civic Facilities and Services	Community and Family Support
Gatton	Lockyer Community Centre Lake Apex Visitor Information Centre Gatton Shire Hall	National Centres Association The Gatton and Districts Committee on the Ageing Anuha Services Various Counselling Services
Forest Hill	Forest Hill Community Hall Forest Hill SES Unit	Forest Hill Community Development Association
Laidley and Laidley North	Laidley Community Centre	Lockyer Valley Community Disability Association
Grandchester	Grandchester Community Hall	Country Music Heritage Association Queensland (Inc)

Source: My Community Directory, 2018 and Google searches

Within the SIA study area, most of the major recreational and cultural facilities are located in Gatton and Laidley. However, there are sport and recreational spaces within each community, varying in size. There is also an active sporting and club scene in most of the local communities. Table 5-46 details sport and recreation facilities; and arts, culture and amenity facilities within potentially impacted communities.

There are several recommended self-guided tourist drives in the Lockyer Valley region, including Laidley Valley, Glen Rock Drive, Spring Bluff Drive and Cobb and Co Tourist Drive. Known fondly as the ‘salad bowl’, the Lockyer Valley is known for its production of high-quality produce and stock as well as scenic landscapes (Lockyer Valley Visitor Information Centre, 2018).

**Table 5-46 Recreation and cultural facilities**

Location	Sport and Recreation	Arts and Culture
Helidon	McGovern Park - Withcott Pony Club Inc Toowoomba and Lockyer Valley Kart Club Inc Tyson Park Progress Park - Helidon Cricket Club and Helidon Tennis Club James Norman Hedges Park Toowoomba Pistol Club	
Grantham	Grantham Sports Reserve Bulger Park McGarva Park Anzac Park	Lockyer Valley Celtic Pipe Band Grantham Butter Factory
Forest Hill	Forest Hill Cricket Club Inc Morris Muche Gebush Park Anzac Park and Forest Hill Place Jeannine Park	Forest Hill School of Arts
Laidley	Laidley Sports Complex Del Ryan War Memorial Swimming Pool Central Narda Oval (Narda Cricket Oval) Bichel Oval There are a number of other sport and recreational spaces throughout Laidley	Laidley Cultural Centre

Location	Sport and Recreation	Arts and Culture
Gatton	Laidley Golf Course Lockyer Valley Sports and Aquatic Centre UQ Gatton Sports Centre Gatton Bowls Club Gatton Showground Gatton Jubilee Golf Course Gatton Indoor Equestrian Centre Lockyer Valley Race Club Lake Apex Park Gatton Sports Centre Cahill Park Complex There are a number of other sport and recreational spaces throughout Gatton	Lions Club Rotary Club of Gatton and Lockyer Inc Lockyer Valley Multicultural Association 205 Squadron Australian Airforce Cadets

Source: My Community Directory, 2018 and LVRC, 2018

## 5.7 Health and wellbeing

### 5.7.1 Data quality

A significant source of data used to profile the SIA study area’s health and wellbeing is drawn from Social Health Australia (PHIDU 2018). The data is reported for defined Population Health Areas (PHAs), comprising a combination of SA2s, including some that are outside the SIA study area (refer Table 5-47). Other data sources include the Census 2016, and SEIFA IRSAD and IEO Indices cited earlier (in Section 5.2).

**Table 5-47 Public Health Area data geography**

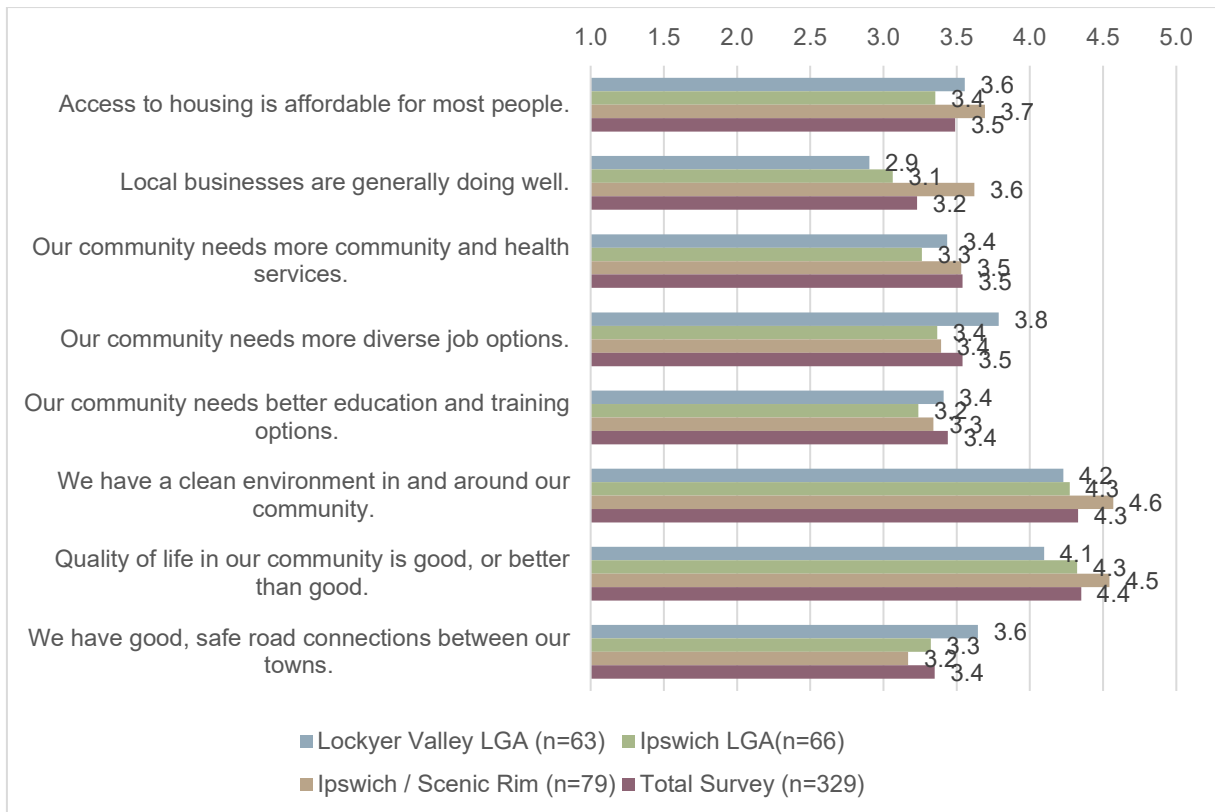
PHA Code	SA2 (Bolded indicates in SIA study area)	Percentage of population in SIA study area (%)	Confidence level
30066	Boonah/Rosewood	50	Medium
30208	<b>Gatton/Lockyer-Valley West</b>	100	High
30068	<b>Lockyer Valley – East</b>	100	High

Source: PHIDU 2018

### 5.7.2 Community survey inputs

The SIA community survey requested respondents to comment on their perceptions of different attributes of community wellbeing in local communities. Figure 5-6 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 most highly rated attributes were the community’s clean environment and the quality of life. The lowest ratings were regarding local business vitality.



**Figure 5-6 Community wellbeing survey results**

Representative comments from the Lockyer Valley LGA which indicate the reasons for the ratings in Figure 5-6 include:

- “It is a small but supportive community. Only a few businesses (e.g. petrol station, corner store), but the community supports others by using the services of ironing people, house cleaners, farm workers.”
- “Local business have gone through a tough time in recent years, but they are going through a renaissance of sorts, adapting to suit a changing population demographic and to encourage visitors to our beautiful Valley. Many of the small towns such as Laidley and Forest Hill have become boutique villages offering services, and unique retail and dining experiences, festivals.”

One respondent from Ipswich LGA said “The established businesses are doing well. The start-up community is growing and there needs to be further work on supporting the micro business sector in the region.”

**5.7.3 Socio-economic factors**

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 (Queensland Health. 2005). Key factors are outlined below.

## 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 indices 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.

As noted in Section 5.2.7, SEIFA indices indicate that shows that Gatton and Lockyer Valley - East SA2s are amongst the 20 per cent most disadvantaged SA2s in Queensland, while Rosewood SA2 is amongst the 30 per cent most disadvantaged.

## Ageing

Ageing is a key determinant of health as the risk of poor health and disability increases with age. Older people living alone have poorer health outcomes (Queensland Health. 2005).

Typical of rural areas, the Lockyer Valley LGA has a higher representation of people over 65 years than the more urban Ipswich LGA and Queensland (16.2 per cent of the population compared with 10.7 per cent and 11.6 per cent respectively). The highest number of older people in the SIA study area is in Gatton (1,236 people) and Laidley (884 people), and while lower in number, older people make up more than one fifth of the population in the State Suburbs of Calvert and Laidley (22.1 per cent and 23.2 per cent respectively).

## Disability

People with disabilities face greater challenges across most of the social determinants of health, including having a low income, finding employment, participating in community activities, and accessing appropriate and affordable housing, health and support services.

On average, the SIA study area has a higher rate of disability than Queensland (affecting 7.1 per cent of the general population compared with Queensland's 5.2 per cent). This is consistent with the higher representation of older people in the SIA study area. In the State Suburbs directly affected by the Project, 1,129 people were recorded as having a core disability, with the greatest numbers occurring in Gatton (424 people) and Laidley (430 people), both of which have a greater concentration of older people.<sup>1</sup> At the suburb level, Laidley and Grantham had the highest proportion of community members with a core disability (11.3 per cent and 8.2 per cent of the population respectively).

## 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 (Queensland Health 2005). Advantage and disadvantage are unevenly distributed in the SIA study area: Gatton, Lockyer Valley - East and Rosewood SA2s (including the suburbs of Calvert, Grandchester, Forest Hill, Laidley, Laidley North, Gatton and Lawes) experience more disadvantage than is typical for Queensland or elsewhere in the SIA study area, and is more pronounced in Lockyer Valley – East SA2.

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<sup>1</sup> ABS Census 2016. Disability is defined as 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.



It follows that households in the potentially impacted communities are generally less well off financially than the average Queensland household, with the median weekly household income below that of Queensland's \$1,400 per week. Exceptions to this are in the suburb of Calvert where the median income was similar to Queensland (\$1,437), and Placid Hills where it was much higher (\$1,694). Median weekly income in Lawes is particularly low (\$574 per week), likely reflecting the high student population there.

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. All SA2s have a higher proportion of residents holding Pensioner Concession Cards than is typical for Queensland, the highest being in Lockyer Valley - East (31.1 per cent of the population over 15 years of age, compared with 21.7 per cent in Queensland, with Rosewood at 25.5 per cent and Gatton/Lockyer Valley – East at 24.7 per cent). Seniors Health Care Card Holders are concentrated in Rosewood at higher levels than is typical in Queensland (9.1 per cent of the population over 65 years old compared with 7.6 per cent); and are lower in Gatton/Lockyer Valley – West (7.0 per cent) and Lockyer Valley – East (4.1 per cent) (PHIDU. 2018 - Referencing 2016 and 2014 data).

The SEIFA Index of Education and Opportunity (IEO) is an area-based index that measures and ranks relative advantage or disadvantage for educational attainment or accessing skilled work. The Index reports a similar result for the SIA study area as the IRSAD reported above; Gatton and Lockyer Valley – East, and Rosewood SA2s are amongst the 305 most disadvantaged SA2s in Queensland (in Deciles 1, 2 and 3 respectively), with in the 30 per cent (ABS SEIFA INDEX. 2016). Lockyer Valley – West SA2 has better opportunities, ranked at the mid-point of SA2s at Decile 5.

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 (PHIDU. 2018). There is a concentration of high unemployment in the suburbs of Laidley North (14.5 per cent), Laidley (11.5 per cent), Helidon (10.3 per cent) and Gatton (9.3 per cent), significantly above the Queensland rate of 7.6 per cent. Unemployment levels were much greater in Lawes (31.5 per cent) where there is also a high tertiary student population.

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 is higher in the SIA study area than is typical for Queensland. It is highest in Lockyer Valley – East SA2 at 19.2 per cent, compared with Rosewood at 14.2 per cent, Gatton/Lockyer Valley West SA2s at 14.8 per cent and Queensland at 12.8 per cent (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.

Housing stress occurs at higher levels in the SIA study area than is typical for Queensland, particularly amongst renters. It is most notable in the Lockyer Valley – East SA2 where 38.8 per cent of low-income households are in rental stress, compared with 33.3 per cent in Gatton/Lockyer Valley – West, 31 per cent in Rosewood SA2 and 28 per cent in Queensland (PHIDU 2018). There is also a higher level of mortgage stress in the Lockyer Valley East SA2 affecting 12.6 per cent of low-income households, while the balance of SIA study area has rates similar to Queensland's 8.5 per cent.

Due to the nature of homelessness, the number of homeless people is hard to estimate accurately. The 2016 estimates (based on the 2016 Census) indicated there were 200 people experiencing homeless across the SIA study area, an increase of 27 per cent on the previous estimate in 2011. Homelessness is concentrated mainly in the SA2s of Gatton (78 people) and Lockyer Valley – East (63 people) (ABS 2016b).

#### **5.7.4 Population Health and Wellbeing**

The following indicators provide an overview into the status of the potentially impacted communities' 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 Rosewood, Gatton and Lockyer Valley – West SA2s was similar to that of Queensland (15.5 people per 100), while the rate of poorer health was much higher in Lockyer Valley – East SA2 at 17.7 people per 100 (PHIDU 2018).

##### **Community strength**

Strong communities exhibit resilience and have well-developed social connections and supports, contributing to community health and wellbeing. The level of volunteering by residents is a measure of community strength. Volunteering levels across the SIA study area are generally similar to that typical in Queensland or much higher, suggesting strength within the SIA study area's communities. Volunteering levels are particularly high in Lawes (43.5 per cent), Placid Hills (29.8 per cent), Forest Hill (22.5 per cent) and Laidley North (20.9 per cent), compared with Queensland (18.8 per cent), but low in Calvert (16.1 per cent), possibly reflecting its older population profile (ABS. 2016a).

The ability to access support in times of crisis is a further indicator of the strength of social connections in a community. The ability for adult residents to find support outside the home in times of crisis is similar to the Queensland rate of 93 people per 100 for most of the SIA study area, other than in Lockyer Valley – East where it is slightly lower at 92 people per 100.

Modelled estimates indicate that only residents in Gatton/Lockyer Valley – West SA2s would be able to raise \$2,000 within a week, in the event of an emergency, at similar levels to Queensland (81.0 people per 100 compared with 81.9 in Queensland); the lowest rate was in Lockyer Valley – East (74.4 people) (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. The SIA study area has a higher representation of school age children who are developmentally delayed in one or more domains than is typical for Queensland, with the percentage particularly high in Lockyer Valley – East SA2 (34.1 per cent compared with 26.1 per cent) (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. While suicide rates are lower than typical rates for Queensland in the Rosewood and Gatton/Lockyer Valley – West SA2s (12.0 and 13.1 people per 100,000 respectively compared to Queensland’s 14.1 people), the rate is nearly twice that in the Lockyer Valley – East SA2 (25.4 people per 100,000) (PHIDU 2018).

**Circulatory and respiratory diseases**

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

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

Available information shows that Lockyer Valley – East SA2, and to a lesser extent, Rosewood SA2 may have a predisposition to circulatory system disease, with hospital admissions occurring at a higher rate here than is typical for Queensland (refer Table 5-48). Rates of hospital admissions for respiratory system diseases are similar to, or lower than those for Queensland.

**Table 5-48 Hospital admissions by type**

Public Health Area	Circulatory system diseases, persons	Respiratory system diseases, persons
	Rate per 100,000 people	Rate per 100,000 people
Boonah/Rosewood SA2	2,567.2	2,289.8
Gatton/Lockyer-Valley West	2,490.9	1,913.3
Lockyer Valley – East	2,802.2	2,237.3
<b>Queensland</b>	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. As such they can only be considered a crude indication of the population likely to be sensitive to air pollution. There appears to be no excessive disposition to asthma in the population where rates of asthma are estimated to be only slightly higher than that rate for Queensland (Rosewood SA2 at 10.5 people/100,000; Gatton/Lockyer Valley – West SA2 at 10.7, and Lockyer Valley – East at 10.6, compared with Queensland at 10.2) (PHIDU 2018).

Community members have raised concerns about the potential for diesel emissions, coal dust or other particulates from the Project to affect their health. Diesel emissions contain concentrations of fine particulate matter, generally measured and reported as PM<sub>2.5</sub> and PM<sub>10</sub>. PM<sub>2.5</sub> are fine particles and are associated with harmful health effects including cardiopulmonary and respiratory disease and has been declared a carcinogen by the World Health organisation (NSW Environmental Protection Authority. 2018). Inhaling black carbon, present in diesel emissions, can cause damage to lung cells potentially leading to cancer (Rail Safety and Standards Board 2016). Diesel emissions are considered in the EIS Appendix K: Air quality technical report.

The population in Gatton and Lockyer Valley SA2s have a higher prevalence of lung cancer with the illness occurring more frequently than is typical in Queensland (54.1 people per 100,000 compared with 51.4 in Queensland); elsewhere rates of lung cancer incidence are lower (Rosewood 47.7 people and Lockyer Valley – East at 47.0) (PHIDU 2108).

### 5.7.5 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 potentially impacted communities lie within the wider West Moreton Hospital and Health Service Region. Health services available to the communities here are described in Section 5.6.4 and include general practitioners in Rosewood, Gatton and Laidley. District hospitals are located in Gatton and Laidley; patients requiring more complex treatment are sent to the major acute hospital in Ipswich.

Most residents 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 Lockyer Valley - East and Rosewood SA2s experience more difficulty accessing healthcare services than is typically the case in Queensland, with 4.1 people and 3.3 people per 100 people respectively having difficulty compared with Queensland's 2.6 people per 100 (PHIDU 2108).

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. HACC services are provided in the home or in the local community, community health centre or local council. 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 (Home and Community Care Program 2013-14). This is likely to also be the case in the SIA study area, where a quarter to a third lived alone (PHIDU 2108, referencing 2014 data). Given the concentration of older people described earlier, it is likely that many of these clients live in the suburbs of Calvert, Gatton and Laidley North and Placid Hills.

Overall rates of home and community care assistance in the SIA study area were much lower than Queensland's rate of 106.3 instances of assistance per 1,000 people. The lowest rate of assistance was in the Gatton and Lockyer Valley – West SA2s (75.5 instances) followed by Rosewood (82.9 instances) and Lockyer Valley – East (87.0 instances) (PHIDU 2108).

### 5.7.6 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 (PHIDU. 2108).

Unemployment is associated with poorer health and wellbeing. Like many areas in Queensland, unemployment amongst Indigenous residents in the SIA study area is high at 18.9 per cent, well above the State's general unemployment rate of 7.8 per cent rate, but lower than the rate for Indigenous people at 20.1 per cent.

Aboriginal and Torres Strait Islander 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).

### 5.7.7 Mental health

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

Mental health and behavioural issues (defined by PHIDU as including anxiety-related conditions, mood disorders such as depression, alcohol and drug problems, or problems of psychological development) are more prevalent in Lockyer Valley – East SA2 than elsewhere in the SIA study area affecting 16.2 people per 100, higher than the Queensland rate of 14.4 people. Elsewhere they occur at similar levels to Queensland (14.2 people per 100 in Rosewood SA2) or slightly higher (at 15.1 people per 100 in Gatton/Lockyer Valley – West) (PHIDU 2108). However, ICC has advised there is a high rate of mental health issues in Rosewood, with a mental health study expected to be finalised soon, as advised by ICC.

Public mental health services are provided in the potentially impacted communities by West Moreton Hospital and Health Service, delivering specialised assessment, clinical treatment and rehabilitation services. They focus on people with the most severe forms of mental illness and behavioural disturbances. The services work in collaboration with primary health (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.

### 5.7.8 Community safety

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

The communities of Rosewood, Gatton and Lockyer Valley – West SA2s tend to feel more safe to walk alone after dark in the local area than is typical for Queensland, while in the Lockyer Valley – East SA2 perceptions of personal safety are much lower at 44 per cent compared with Queensland's 50.9 per cent (PHIDU 2108, referencing 2014 data).

The rate of criminal offences in the SIA study area is higher than the Queensland rate of 6,622 offences per 100,000 people and has increased steadily in the three years to 2016/17. Rates are particularly high in Gatton SA2 at 15,562 offences per 100,000 people, followed by Rosewood at 9,155 offences, Lockyer Valley – East at 8,006 offences and Lockyer Valley - West at 7,497 offences (Queensland Police, 2016-17).

### 5.7.9 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 Organization 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 racial discrimination and disadvantage).



Queensland Magistrates Courts data reports on applications for Domestic Violence Orders (DVO). In 2017-18, 868 DVO applications were lodged in the Toowoomba Magistrates Court (data are not reported for Gatton Magistrates Court). Of Queensland's 20 magistrates' courts reporting data, the Toowoomba Court had the 10<sup>th</sup> highest level of applications (not adjusted for the catchment population) (Queensland Courts 2018). However, the true scale of the family and domestic violence is likely much greater as only a small proportion of victims ever report violence (COAG 2016).

### **5.7.10 Traffic safety**

#### **Road Safety**

The death rate from road traffic injuries is high in Lockyer Valley – East, occurring at the rate of 7.7 people per 100,000 compared with Queensland's 5.4 people/100,000. Elsewhere the rate is a relatively low 2.3 people per 100,000 in Rosewood SA2 and 2.9 people in Gatton/Lockyer Valley – West SA2s (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 crossing in the decade to June 2012 in Queensland. This equates to a normalised rate of 0.4 collisions per million train km 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; NSW was significantly lower at 0.16 (Australian Transport Safety Bureau. 2012).

In the five years to 2013 there were six serious injuries and eight fatalities from running line and level crossing collisions with people in Queensland, and 67 serious injuries and eight fatalities from people slipping, tripping or falling (no data is reported for suicide). Most occurred within the greater Brisbane network, with none recorded in the SIA study area (Queensland Government Data).

There is over 7,000 km of freight and passenger rail track throughout Queensland (Queensland Rail. 2018). The Project would add a further 47 km single track dual gauge railway track to this, located mainly within the protected future State transport corridor from Gowrie to Grandchester.

## 6 Stakeholder engagement

This section outlines the process and results of community and stakeholder engagement which have informed the SIA.

### 6.1 ARTC engagement

ARTC values active engagement with stakeholders and local communities. A wide range of community consultation activities were undertaken during the EIS process, including:

- Five community information sessions in April 2017 (in Helidon, Grandchester, Forest Hill, Gatton and Laidley) to raise community awareness of the Project and advise of the formal start of the approval process
- 12 community information sessions in May-June 2017 (in Ipswich, Toowoomba, Gatton, and Laidley, with multiple session in all locations except Ipswich) focused on the content of the draft ToR for the Project's EIS and how to make a submission
- Seven community sessions and displays in May 2018 (two in Gatton, two in Grandchester, one in Forest Hill, one in Laidley and one in Helidon) to inform the development of the EIS
- 18 displays during April-May 2019 at various locations to discuss flooding/hydrology and rail-road interfaces
- Seven community information sessions during July 2019 (three in Gatton and one each in Helidon, Laidley, Grandchester and Forest Hill) to discuss the Project design and potential impacts
- Individual project briefings and meetings with LVRC and the ICC
- 381 face to face meetings involving at least 369 landowners including business owners
- Meetings with churches, schools, the UQ Gatton Campus, and childcare centres
- Consultation with the Yuggera Ugarapul People, which commenced in February 2017 and is ongoing
- CCC meetings, held quarterly since December 2017
- Targeted workshop on hydrology and flooding, flora and fauna, and on noise and vibration and visual impacts, as part of CCC meetings
- Communication strategies including paid advertising, fact sheets, mail-outs, interactive mapping available via the Project's website, an email exchange facility and a free call number.

EIS Appendix C: Consultation report provides a detailed account of ARTC's stakeholders and community engagement processes.

Key themes identified in ARTC consultation which are considered in the SIA included:

- Concerns about level crossings
- Impacts on local roads e.g. increased traffic and heavy vehicles, and traffic safety
- Impacts on connectivity including roads, and pedestrian/cyclist routes
- Impacts of property acquisition
- Impacts on property values
- Damage to farm infrastructure
- Amenity relating to laydown areas

- Impacts on amenity related to noise or dust
- Community benefits resulting from the Project
- Impacts on parks and community facilities
- Health concerns
- Management of impacts on biodiversity e.g. weed management
- Impacts on agricultural activities, stock routes and livestock
- Waste management
- Community safety.

These issues have been considered in the SIA.

## 6.2 SIA engagement

The purpose of SIA engagement was to ensure that directly affected stakeholders and other community members had the opportunity to provide input to the social baseline, impact assessment and mitigation development. SIA engagement principles are shown in Table 6-1.

**Table 6-1 SIA engagement principles**

Principles	How achieved
SIA considers the views of directly affected stakeholders	<ul style="list-style-type: none"> <li>■ The views of community members who may be affected by the Project’s impacts or benefit from Project opportunities were sought and are represented in the SIA</li> </ul>
SIA engagement is inclusive of all interested stakeholders	<ul style="list-style-type: none"> <li>■ Access to SIA engagement was available and accessible through participation in the community survey, community information sessions, CCC meetings, workshops, and ARTC’s Social Pinpoint and CollabMap tools</li> <li>■ The results of ARTC’s engagement with landowners, residents, Councils, Traditional Owners, businesses and other key stakeholders are incorporated in the SIA</li> </ul>
Stakeholders are able to provide informed inputs to the SIA	<ul style="list-style-type: none"> <li>■ Stakeholders who participated in engagement were provided with information about the nature and location of the Project, and the range of impacts and opportunities that may result</li> </ul>

SIA engagement was integrated with ARTC engagement processes for the Project, through participation in information sessions, drop-in sessions, and CCC meetings. ARTC’s meetings with landowners, businesses and traditional custodians also provided inputs to the SIA.

SIA-specific stakeholder engagement included a community survey, workshops and interviews with community and government service providers, a meeting with the Lockyer Valley Tourism Association, meetings with ICC and LVRC representatives, Government and Council workshops.

The SIA engagement process is summarised in Table 6-2.

**Table 6-2 SIA Engagement**

Stakeholder Groups	Purpose	Mechanism	Timing
Community members and businesses	<ul style="list-style-type: none"> <li>Provide information about the Project alignment and EIS study process</li> <li>Enable community members to contribute their views on community values and scope of potential social impacts and benefits</li> <li>Identify businesses' views on potential impacts and opportunities</li> </ul>	<ul style="list-style-type: none"> <li>Participation in community information sessions (varying number of participants – refer EIS Appendix C: Consultation report)</li> <li>SIA community survey (approximately 200 participants from Ipswich, Lockyer and Lockyer Valley/Scenic Rim LGA community members)</li> <li>The results of ARTC's individual consultations with businesses in and near the disturbance footprint have been considered in the SIA</li> </ul>	<ul style="list-style-type: none"> <li>June 2018</li> <li>June -July 2018</li> </ul>
	<ul style="list-style-type: none"> <li>Collect information on social baseline values and residents and business' views on potential impacts</li> </ul>	<ul style="list-style-type: none"> <li>Discussions with Lockyer Valley CCC (approximately 12 members and 52 observers)</li> <li>Community meeting with Lockyer Valley Tourism Association (approximately 50 people)</li> </ul>	<ul style="list-style-type: none"> <li>October 2018</li> </ul>
	<ul style="list-style-type: none"> <li>Obtain community input on potential impacts, benefits and mitigation</li> </ul>	<ul style="list-style-type: none"> <li>Interviews with community members at community information sessions (approximately 20 interviews)</li> </ul>	<ul style="list-style-type: none"> <li>July 2019</li> </ul>
Local Government: ICC and LVRC	<ul style="list-style-type: none"> <li>Brief Council and managers on the draft SIA scope and seek their inputs on potential impacts and draft mitigation measures</li> </ul>	<ul style="list-style-type: none"> <li>Meetings with planning and community development managers and principal officers (six Council staff at each meeting)</li> </ul>	<ul style="list-style-type: none"> <li>October 2018</li> </ul>
	<ul style="list-style-type: none"> <li>Provide Council managers with a briefing on draft SIA findings and proposed mitigation measures and seek feedback</li> </ul>	<ul style="list-style-type: none"> <li>SIA workshop with Council staff (7 staff from ICC and LVRC)</li> </ul>	<ul style="list-style-type: none"> <li>July 2019</li> </ul>
Traditional Owners Yuggera Ugarapul People	<ul style="list-style-type: none"> <li>Identify Indigenous community values to be considered in the SIA</li> <li>Seek inputs on opportunities for Indigenous economic and community development</li> </ul>	<ul style="list-style-type: none"> <li>Interview with Yuggera Ugarapul Elders (two people)</li> <li>Indigenous community organisations' participation in social infrastructure workshops (two people)</li> <li>SIA team meeting with Yuggera Ugarapul People (10 people)</li> </ul>	<ul style="list-style-type: none"> <li>June 2018</li> <li>July 2019</li> <li>November 2019</li> </ul>

Stakeholder Groups	Purpose	Mechanism	Timing
<b>Community and Government agencies</b> Queensland Health (Gatton Health Service) Education Queensland (Gatton School) QPS, QAS and QFES DITRDC LVRC Lions Club of Gatton Lockyer Valley Minsters' Association Anglican Church of Gatton	<ul style="list-style-type: none"> <li>■ Identify social infrastructure capacity and gaps</li> <li>■ Seek input on social impacts and opportunities for social infrastructure providers and vulnerable groups</li> <li>■ Seek views on potential mitigation strategies</li> </ul>	<ul style="list-style-type: none"> <li>■ Two workshops (Ipswich and Gatton) with social infrastructure providers (total of 10 organisations)</li> <li>■ Interviews with social infrastructure providers in potentially impacted communities to address issues raised in workshops (four interviews)</li> </ul>	<ul style="list-style-type: none"> <li>■ October 2018</li> </ul>
<b>Queensland Government Departments</b> DSDTI, now DSDILGP and Department of Tourism, Innovation and Sport DCDSS, now DCHDE DTMR DESBT Department of Education DATSIP, now within DSDSATSIP) DHPW, with Housing now within DCHDE QH QPS DITRDC	<ul style="list-style-type: none"> <li>■ Provide briefing on draft SIA results and seek feedback</li> <li>■ Outline mitigation and benefit enhancement strategies and seek feedback</li> <li>■ Identify further engagement required with government agencies</li> </ul>	<ul style="list-style-type: none"> <li>■ Technical workshop with Government agencies, coordinated by the Office of the Coordinator-General</li> <li>■ Consideration of the results of ARTC consultation with Education Queensland</li> </ul>	<ul style="list-style-type: none"> <li>■ July 2019</li> </ul>

### 6.3 Engagement outcomes

Section 4.3.1 provides a profile of stakeholders and key issues raised by people in potentially impacted communities. This section summarises key issues raised during the engagement process.

#### 6.3.1 Community survey

A community survey was undertaken for Inland Rail’s G2H, H2C and C2K Projects between 31 May and 31 July 2018 (referred to below as the G2K projects). The survey was hosted online using the Survey Monkey platform, supported by hardcopy survey administration at community information sessions during June 2018. The purpose of the survey was to enable community members to provide inputs to the social baseline and to the scope of impacts and benefits to be assessed.

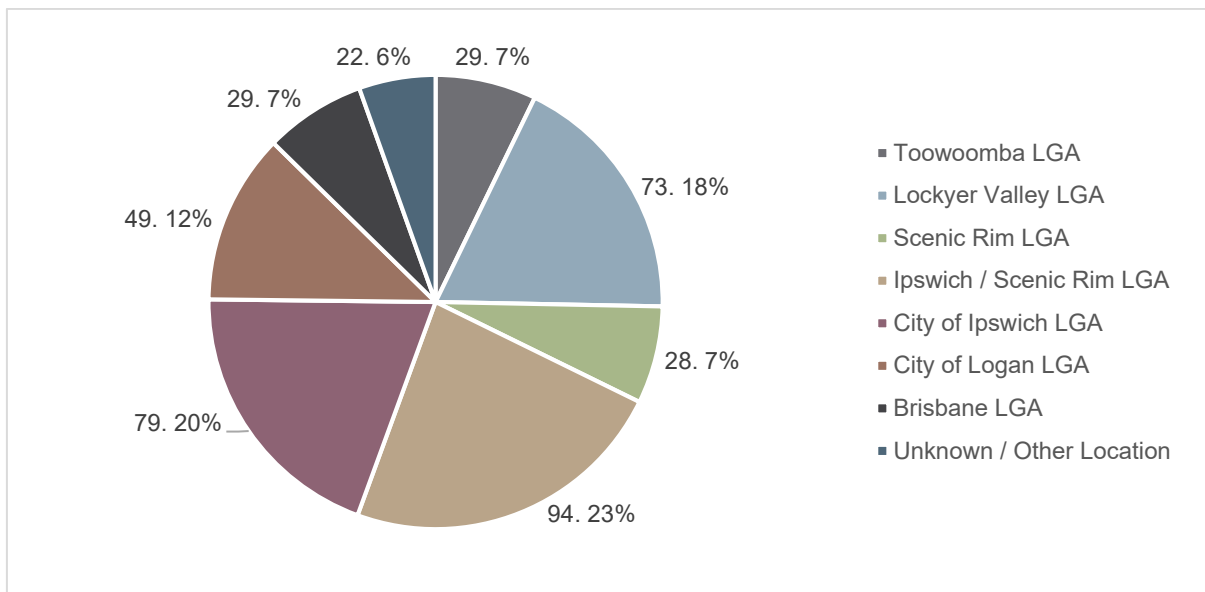
The survey received a total of 403 responses, of which 384 respondents identified a residential location (representing 95 per cent of total) and 19 respondents (5 per cent of the total) skipped the question. The community survey data of most relevance to the Project includes inputs from 246 respondents, including 152 residents of the Lockyer Valley and Ipswich LGAs and 94 residents from communities on the border of the Ipswich and Scenic Rim LGAs.



Figure 6-1 shows the percentages of survey participants from each LGA, where:

- 18 per cent of the total survey sample (73 responses) came from the Lockyer Valley LGA
- 20 per cent of the total survey sample came from the Ipswich LGA (including 12 respondents from Ivory’s Rock Convention and Events Centre)
- 23 per cent of the total survey sample were from communities in the Ipswich/Scenic Rim LGA boundary area
- 12 per cent (49 responses) came from Logan LGA
- 7 per cent or 28 surveys came residents of the Scenic Rim LGA.

The balance of survey responses came from Brisbane LGA (7 per cent, 29 responses), Toowoomba LGA (7 per cent, or 29 responses), and unknown or other locations.



**Figure 6-1 Inland Rail G2K Project SIA community survey - total responses by LGA**

Respondents from the Lockyer Valley and Ipswich LGAs anticipated more negative effects from Inland Rail than positive (refer Section 4.3.2). The general tone of survey comments indicated mistrust, anger, fear and opposition to the Project route. Some comments acknowledged the Project’s national significance and broad-scale benefit, but many others expected Project benefits would not be experienced at a local level. Overall, respondents anticipated negative effects in relation to:

- Property values
- Quiet enjoyment of private property
- Severance of farming land and impacts to agricultural productivity and business operations
- Impacts to the scenic amenity and character of townships
- Disruption of residents’ quiet way of life and enjoyment of public spaces and townships, also affecting local visitor appeal
- Community wellbeing, including the potential for increased stress, anxiety and depression among affected landowners and nearby residents
- Noise impacts causing nuisance, affecting sleep and general health and wellbeing

- Potential for air pollution and coal dust to affect the drinking water of nearby residents that rely on rainwater tanks.

As shown in Section 4.3.2, 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, generally respondents were 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 Project impacts or maximise Project benefits. Key themes in relation to impact mitigation included:

- Changes to the Project alignment to avoid impacts on towns, and/or and minimising agricultural land severance
- Management of road/rail interfaces and road connectivity to avoid increased travel distances and fragmentation within and between towns
- Monitoring property values
- Addressing visual impacts through design and aesthetic treatments
- Implementing high quality vibration, noise and dust control measures
- Transparent and respectful engagement
- Investing in long-term community amenity, including complementing local rail history, improving community connectivity and safety
- Business and industry engagement, and various partnership opportunities.

### **6.3.2 Community information sessions**

During May-June 2018, SIA and EIS team members participated in six community information sessions (at Helidon, Grandchester, Gatton [two sessions], Forest Hill and Laidley) to provide information about the SIA and EIS process, seek input on the scope of potential impacts, and interview local residents about potential social impacts. Key themes from the information sessions included:

- Loss and severance of farming properties, business operations and transport routes
- Impacts of severance/realignment on local connectivity
- Impacts on property values, property plans and future economic position of affected residents
- Noise, vibration, visual amenity and connectivity impacts on residential amenity and rural character
- Changed flood patterns and increased flood risk
- Impacts on traffic safety and/or connectivity as the result of road re-alignments, level crossings construction traffic
- Cumulative noise impacts
- Concerns about impacts on wildlife habitat including koala habitat
- Air quality impacts from diesel emissions and concern about coal dust transport
- Safety, including incident management in the Little Liverpool Range tunnel, maintaining firefighting access and intersection safety
- Impacts on rural character and environmental qualities
- Impacts on town centre amenity, visitor appreciation and tourism values

- Concerns about train derailments and community safety
- The need for more information to enable community members to understand potential impacts.

### **6.3.3 Lockyer Valley Community Consultative Committee**

The SIA team attended the Lockyer Valley CCC in October 2018 to discuss the social impact assessment, and ARTC social performance staff have attended the CCCs in March 2019 to discuss the SIMP, in August 2019 to discuss local business participation, and in October 2019 to discuss social impacts and opportunities. CCC members have raised the following issues of relevance to social impacts:

- Frustration with the process for determining the Project's alignment and opposition to the outcomes
- Location of crossing loops at Laidley and associated noise of train idling
- Impacts of land severance, displacement and reduced amenity for people living in or near disturbance footprint
- Introduction of a freight rail corridor through Lockyer Valley's areas of natural beauty, and potential to deter tourists from the region's growing tourism and event offerings
- Potential for the rail line (embankments, structures and culverts) to change flooding patterns and/or exacerbate flooding
- Changes to the rural character and amenity of local towns
- Impacts on native title interests or cultural heritage
- Noise and vibration impacts on residents, business and properties near the rail line, with specific mention made to the possible future inclusion of 3.6 km long trains on the track
- Potential for passenger rail inclusion as part of Project planning
- Interest in ongoing monitoring of community wellbeing as the Project is delivered.
- The future of the Interlink facility at Gowrie Junction (which is not being delivered as part of the Project and requires separate approvals).
- Noise impacts and noise management measures in relation to the Valley Vista Estate.

### **6.3.4 Lockyer Valley Regional Council**

The SIA team met with LVRC officers in October 2018, and in July 2019 as part of a workshop with LVRC, ICC and Scenic Rim Regional Council officers. LVRC officers also participated in the community and government agency workshop (refer Section 6.3.9).

The October 2018 meeting provided an update on the Project, discussed social baseline findings, and identified Council's priorities for the SIA. Key issues raised during the first meeting with Council representatives included:

- Impacts to the Lockyer Valley's visual amenity, and the lifestyle values and tourism values attaching the landscape and heritage of local towns
- The centrality of Lockyer Valley farms to the Lockyer Valley LGA but also to regional food production
- The effects of the overpass connecting Spencer Street to Eastern Drive on the amenity of the Gatton Caravan Park and Wilks Park
- Potential loss of Apex Park affecting Council's compliance with park area requirements
- Impacts on the connectivity and amenity of Forest Hill particularly concerning

- The need for walking paths to be maintained for residents to get from one part of the town to the other
- Potential for properties close to the Project to lose value, with existing uncertainty around property values and banks' risk assessments already an issue in the area following flooding
- Concerns regarding the potential for property severance and reduced connectivity across other rail lines affect the productivity of farms and their contributions to the region's farming sector
- The likelihood that increased noise from the freight rail line would reduce the amenity of residents and the attractiveness of local communities
- Existing community anxiety about flooding which is exacerbated by fears that the Project will change flooding patterns or that debris caught against rail lines will result in local flooding increases
- The potential for direct impacts on Council parks and roads (e.g. Apex Park) during construction
- Reduced vehicular and pedestrian connectivity within towns and to community facilities in Grandchester, Forest Hill and Gatton
- Impacts on the amenity of businesses and homes in Forest Hill, Gatton and Grandchester
- Concern regarding the potential for construction vehicles and activities to exacerbate the current fire ant problem in the Lockyer Valley, with consequent impacts on use of public areas such as parks
- Decreased property values with potential to affect financial security, and to change the socio-economic characteristics and identity of the town
- Need for ongoing engagement with Council.

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 and agency input. Feedback included:

- Concern regarding the impacts of the Project's operation on the Lockyer Valley's 'brand' as a scenic and natural place to visit
- The need to consider the effects of roadworks, construction noise on tourists' experience of the Lockyer Valley and impacts on the amenity of tourism facilities, and the need for construction planning to consider large tourism events
- The need for management of impacts on business' amenity and access e.g. in Gatton and Forest Hill
- Impacts of severance on agricultural lots, and the potential to affect their viability
- The potential for increased housing demands from major project workforces which could displace low income households
- The need to consider competition for tourism accommodation and potential to deplete the availability of accommodation
- The potential for impacts on the amenity of DCHDE properties which house people with low economic resources
- Perceptions of a decrease in property values near the EIS investigation corridor
- Observations of significant stress being caused by uncertainty and fears about the Project's impacts
- The need for awareness of existing challenges to mental health, including the effects of drought on farmers and business owners
- Concerns regarding the Project's use of water, particularly in drought, which could affect farms and other businesses' access to water

- Concern regarding the potential for upstream flooding impacts in the Brisbane River Valley floodplain.

ARTC has met with LVRC's RSIS Coordinator three times to date. The initial discussion was regarding local priorities as determined by the RSIS consultation process, upcoming initiatives and potential to work together to develop training programs. Subsequent discussions focussed on the development of a joint SQW application between LVRC and Inland Rail which focused on construction skills and alignment with RSIS priorities i.e. transferable and cross-industry skills which will also support the agricultural industry.

Issues pertaining to road design and road use were discussed at LVRC Technical Working Group at meetings during 2019 and 2020. This included discussion of road interface agreements, design and pavement standards, road maintenance, haul roads for construction, opportunities to 'future proof' Sandy Creek Road, Luck Road, Philips Road and Connors Road (i.e. for the rail over road bridge design to not exclude future realignment of the roads), and the road re-alignment/design for Golf Links Drive/Woodlands Road intersection. Discussions with Council regarding these issues will continue as part for the detailed design phase to optimise road and rail-road interface designs and maintenance arrangements.

### 6.3.5 Ipswich City Council

The SIA team met with ICC in October 2018. Key issues raised for consideration in the SIA included:

- Community anxiety about increased flooding risk, particularly in Grandchester
- Property severance affecting small rural residential blocks
- Intensification of rail activity on amenity and liveability of Grandchester, which has a low population mass, and is a vulnerable community following flooding and also for socio-economic factors
- Noise impacts on local residents and an increase in the frequency of rail noise
- Potential impacts on tourism operations, including the entrance to Spicers Hidden Vale (via Grandchester-Mount Mort Road at Ch 65.9 km)
- Opportunities for Indigenous businesses that are involved in Council's Indigenous business development program to participate in Project supply opportunities.

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

- The importance of ensuring Grandchester's historic character, including the heritage character of the railway station, is protected
- The importance of Grandchester as a tourist departure point to the Spicers Retreat, requiring management of visual impacts and traffic disruptions to avoid deterring tourists
- 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 need to consider the effects of roadworks, construction noise and other impacts on the amenity 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).

ARTC has met with ICC's RSIS Coordinator twice, initially to discuss local priorities, upcoming initiatives and potential to work together to develop training programs and subsequently to develop a joint SQW application between ICC and Inland Rail to offer construction skills training as part of upgrading the Gatton Soccer Club grounds.

ICC has raised concerns regarding the construction of a level crossing on Mount Mort Road near the Grandchester State School, resulting in the inclusion of a 'pedestrian maze' at this crossing.

### 6.3.6 Traditional owner engagement

Traditional owners have been consulted through the Cultural Heritage assessment process (refer EIS Appendix S: Cultural heritage survey report) and by ARTC with respect to Indigenous employment and training opportunities. An interview with Yuggera Ugarapul Elders (Grandchester CIS 26th May 2018) along with Elders' inputs to CCC discussions, provided further information for the SIA. Key issues included:

- Respect for the cultural landscape, and the Project's potential to change how it is experienced
- 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 discuss the potential impacts and opportunities associated with Inland Rail projects. Key issues of relevance to the Project 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 contractors, in consultation with Yuggera Ugarapul people
- Interest in an opportunity to talk with Indigenous agencies that will be involved in Inland Rail projects
- Employment and business opportunities which could include:
  - Establishing an Indigenous Rangers program to be involved in environmental management and rehabilitation works during and after construction
  - A dual focus on skills training and employment for young people and mature jobseekers who can then go onto other construction work
  - Advice to Yuggera Ugarapul People regarding business opportunities and skills that construction contractors require
  - Potential for ICC 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's interest in meeting with primary contractor once awarded, and specification of goals for Yuggera Ugarapul People to be involved in Project construction.



### 6.3.7 Landowner engagement

ARTC's engagement with landowners included (to December 2019) 124 face to face meetings involving at least 369 landowners. Key issues discussed included:

- The timeline for proposed activities and uncertainty experienced by landowners regarding the acquisition process
- Communication channels for landowners to contact ARTC
- Concerns about the impacts of land acquisition on residential and agricultural uses
- Landowners' requirements with regard to design developments and ensuring legal access to their property
- Proposed changes to public roads and levels crossings
- Concerns about exacerbation of flooding risks
- Concerns about noise exceedances and dust.

### 6.3.8 Businesses

ARTC has consulted with businesses (including farm owners) to identify potential impacts on businesses and identify business opportunities resulting from the Project, including the need for capacity building to enable local businesses to participate.

Issues of interest to businesses in potentially impacted communities include:

- Maintaining access to their properties and business premises
- The potential for traffic congestion or changes to the road network to affect trade e.g. in Gatton and Forest Hill
- Potential for amenity impacts such as noise or dust
- Property acquisition affecting businesses near the Project footprint including road re-alignments, and compensation arrangements
- Concern that flooding risks could be exacerbated and affect businesses
- For farming businesses, impacts on groundwater access
- Impacts on agricultural activities including the movement of stock, produce or equipment across the rail corridor
- Weed management
- Changes to visual amenity affecting the character of towns.

The Project's alignment passes through the Forest Hill and Gatton town centres. ARTC has had more than 330 meetings with businesses in Gatton and Forest Hill, as well as four workshops in each town.

Key issues raised by businesses in Forest Hill included:

- Limited local benefit as terminals or sidings are not proposed for Forest Hill as part of the reference design
- Impacts to local business if the change from a level crossing to a grade-separated crossing affects through traffic e.g. on Victoria Street
- Impact on the visual amenity of Forest Hill streets and public areas close to the rail corridor, likely to detract from current historical character

- Impacts on the amenity of Forest Hill businesses including visual, noise and vibration impacts during construction
- Impacts of construction traffic in the town centre on character and business access
- Concerns about construction noise impacting outdoor dining and accommodation facilities
- Hydrology impacts and potential impact of additional structures (such as noise barriers) in flood events, with some stakeholders acknowledging an opportunity to benefit the community through improved drainage from south to north
- Concerns about operational noise impacting on businesses amenity.

Potential business opportunities identified in the construction phase included provision of accommodation and meals to the workforce.

Additional issues raised by agricultural businesses in the Forest Hill area included:

- Effect of land-take on business sustainability
- Potential to affect irrigation infrastructure
- Concern about flood risk for down-stream infrastructure impacts and potential for loss of topsoil in a flood event due to additional drainage.

In Gatton, key issues raised by businesses included:

- Limited local benefit as terminals or sidings are not proposed, and passenger rail is not part of the Project
- Impact of the Gaul Street level crossing closure for residents driving north/south, potentially affecting through traffic to town centre businesses
- Potential for closure of the Gaul Street level crossing to affect pedestrian access to the town centre, RSL facility and events such as processions to the ANZAC memorial (a pedestrian level crossing is proposed to address this concern)
- Operational noise and dust impacts to businesses on Railway Street/Crescent Street
- Potential to impact on the availability of parking in the CBD (Crescent Street/Railway Street) due to construction works
- Boundary impacts on businesses including potential for land acquisition for the widening of Eastern Drive and road re-alignments to affect parking arrangements
- Concern about pedestrian/cycle access over Eastern Drive
- Concern about construction impacts to passing trade, including impacts on the service station accessed from Eastern Drive
- Potential to increase flooding risks
- Concerns about additional wait times at level crossings and implications for transport drivers
- Concern about construction noise, vibration, dust and impacts on visual amenity to affect business premises and homes
- Potential for vibration impacts to ANZAC memorial/Weeping Mothers monument
- Concerns that houses impacted by operational noise could become unattractive to tenants
- Potential for the construction footprint to impact the development of a proposed extension to Bunnings.

Businesses were generally supportive of the potential for employment and supply opportunities during construction. Some also acknowledged support for additional drainage under Eastern Drive and along the rail alignment proposed as part of the Project's reference design.

Additional issues raised by farming businesses included:

- Impact to viability of businesses adjacent to proposed alignment
- Concerns about the potential for proposed land acquisition to affect the viability of farms and farm infrastructure, including dams and greenhouses
- Potential to modify the area's hydrology which could change food risks and/or ability of properties to capture surface water
- Opportunity to supply the construction phase e.g. transport services.

Lockyer Chamber of Commerce and Industry based in Gatton has expressed support for the Project, but has concerns regarding flooding impacts, the impact of additional level crossings, potential delays for traffic and community severance as a result of the rail corridor being upgraded. The possibility of stations or terminals for freight being constructed in the Lockyer Valley was of interest, noting that there is otherwise limited local benefit.

Issues raised by community members and businesses at the Project's meeting with the Lockyer Valley Tourism Association in May 2018 included:

- The effect of bridges, viaducts, other elevated structures and embankments on the scenic amenity of the Lockyer Valley
- Concern regarding disruptions to traffic and potential for interruption to tourism businesses' access
- Effects on the rural character of the Lockyer Valley, from a combination of traffic disruption and noise during construction
- Longer-term impacts on the scenic amenity of the Lockyer Valley and its rural surrounds due to the appearance of rail bridges
- Operational noise impacts on tourism facilities and local towns.

ARTC has also met with the owner of the Gatton Caravan Park twice, with SIA consultation commencing (after a delay during 2020) in October 2020. The results of this consultation are described in Section 7.3.7 and include:

- Concern regarding amenity impacts on the caravan park
- Concern about the potential for land acquisition within the park to reduce its capacity.

### **6.3.9 Community and government agencies**

Workshops were held with community and government agencies in Gatton and Ipswich, and in Toowoomba where regional services are located, during October 2018. Participants included:

- Queensland Health (Facility Planning and Management)
- TAFE Queensland
- Indigenous Elders
- Ipswich Community Health Services Centre
- Gatton Health Service (Gatton Hospital, West Moreton Hospital and Health Service)
- Laidley Police Station

- Gatton State School
- Grandchester State School
- UQ Gatton Campus
- Lockyer Valley Minister's Association/Anglican Church of Gatton (St Albans)
- LVRC
- Lions Club of Gatton
- DITCRD.

Key issues raised at the Gatton workshop included:

- Connectivity
  - Concern about access and connectivity in towns, including access to services
  - Disruption of pedestrian links to the Gatton Caravan Park
  - Rail crossings will result in connectivity issues, and back up of traffic nearby roads leading to safety risks
  - Transient residents (e.g. students and migrant workers) needing to be made aware of risks relating to crossing the rail corridor
- Community wellbeing
  - Increased flood risk raised as a concern with reference to Laidley, Forest Hill and Grantham
  - Division of towns (Forest Hill, Grandchester and Gatton)
  - Concern about impacts to Hickey Street in Gatton
  - Anecdotal feedback that land values are already dropping
- Social infrastructure
  - Increased noise at Gatton State School
  - Concern regarding pedestrian connectivity for children who walk to school, and access to major sporting fields on the other side of the rail line from the schools in Gatton
  - Existing traffic bottleneck at the Gatton Hospital during school drop-off and pick up times, with potential for the Project to exacerbate this issue, and potential for impacts on emergency access
  - Gatton Showground is a heavily used space for community and large-scale events
  - Access to Gatton Bowls Club may be affected by Gaul Street crossing
  - Project represents opportunity to contribute to local community e.g. investment in schools
  - Anticipation of significant noise being experienced by church communities, with substantial difficulties and expense entailed in obtaining comparable facilities if churches need to relocate
- Business and employment
  - Access to employment is critical to the sustainability and wellbeing of the local community
  - Hope for improvement in local unemployment rate
  - Concern that the Project would not benefit local towns and their businesses
  - Potential for some businesses to be negatively impacted due to changes to accessibility and convenience.

Key issues raised at the Ipswich workshop included:

- Community safety and health
  - Interest in implications for community mental health
  - Laidley Hospital is a typical rural hospital and resources are limited
  - Concern about UQ student safety
  - Existing mental health vulnerability following the impacts of the floods
  - Concern about how property severance will affect people
- Social infrastructure
  - Grandchester State School (with 40 students) is in very close proximity to the Project, and there is concern about impacts on the learning environment, and the future of the school
- Grandchester school students' pedestrian and bike access on Grandchester Mount Mort Road could be affected, Establish relationships early with Police to mitigate impacts on community safety and demands for service
- Business and employment
  - Increased employment options desired
  - Consideration of potential cumulative impacts on labour demand
  - Project represents opportunity to improve Indigenous unemployment rates
  - Opportunity for local quarries to supply the Project
  - Tourism values potentially affected during construction of the Project
- Housing
  - Potential demands on short-term accommodation, particularly in Gatton where accommodation is limited and in demand from transient workers throughout summer, autumn and spring

Issues raised in the Toowoomba workshop included:

- Employment and training
  - There is a good mature skills base locally within businesses, strengthened by construction of the Toowoomba Bypass and gasfields developments
  - Construction Skills Queensland works closely with TAFE and has good programs supporting construction skills development
  - Toowoomba TAFE being willing to work with Project to provide work safety, work readiness, skills training and qualifications
- Health
  - DDHHS district stretches from the border to Kingaroy and includes 19 hospitals, some of them very small and locally oriented
  - Smaller hospitals have limited ability to deal with any additional trauma cases which may occur as a result of the Project
  - Increased demand from the workforce will need to be planned for and managed e.g. different drugs may need to be stocked

- Region is seeing increased trends in drug addiction, mental health presentations and suicides as a result of the drought
- Police services
  - Darling Downs region covers Goondiwindi to Laidley
  - No big gaps in police catchments but some areas where it's difficult to get to people
  - Need for information about dangerous goods transportation e.g. in the rail tunnel
  - Need to orient Police to the Project and key sites early in the construction process, and after completion to aid efficiency in emergency response
  - Want to work closely together with ARTC to plan ahead for management protocols, joint training and capacity building exercises and equipment movements which may require additional resources
  - Protests are possible (as have been experienced in relation to the gasfields and Toowoomba Bypass projects) and use a lot of police resources
  - Decrease in road trauma due to decreased trucks on roads is an important benefit
- Emergency services
  - Generally speaking, disaster management response capacity is good following regional needs during and post the 2011 floods.
  - Disaster Management coordinator needs to be involved in planning emergency responses/hazard management
  - Access for helicopters along the alignment needs to be clarified
  - Distance to service providers not an indication of level of service e.g. Toowoomba Bypass viaduct close to Toowoomba but in a difficult to reach area.

### 6.3.10 Engagement with schools

ARTC commenced engagement with schools and early learning centres which may be affected by construction noise, operational noise or changes to traffic conditions in November 2019. Key findings from engagement in November-December 2019 include:

- Grandchester State School noted the age of the school's existing buildings (including the school residence which would be closest to the Project), and the expectation that the Department of Education would confirm requirements and standards for treatment for operational noise impacts
- Grandchester State School also noted its concern for students accessing the school from the northern side of the existing rail alignment, as the short-cut via the Grandchester Rail Station and Recreation Grounds would be impacted by the Project, and also concern about the requirement for an additional level crossing which would impact on the school's main access route on Mount Mort-Grandchester Road
- Gatton State School noted that the closest area to the Project is a shaded area and the next nearest classrooms are temporary buildings
- Gatton State School also noted concern for the school drop-off routes via Gaul Street level crossing and William Street, noting that an increase in traffic volumes could impact on trafficability



- Forest Hill State School identified the Prep building (constructed in 2011) as closest to the Project, along with the Library, and noted that the interiors of classrooms are fairly quiet, and students don't often hear the trains through town
- Gatton Kindergarten noted the building is approximately 50 years old, a shaded playground is the nearest area to the Project, and the centre has plans to expand, pending neighbouring property discussions.

During January-February 2020, ARTC wrote to the following schools and learning centres to provide information including a project update, EIS update, potential operational noise impacts and mitigations, and potential construction impacts in relation to the schools:

- Helidon State School
- Little Angels Kindergarten, Forest Hill
- Kates Place Early Education & Child Care
- Lockyer Valley Early Education and Pre School
- Laidley District State School
- St Mary's Catholic Primary School, Laidley
- Gatton Childcare Centre
- Laidley State High School
- Laidley District State School
- Laidley District State School
- University of Queensland, Gatton Campus.

Meetings were held in response to stakeholder requests with the following during February 2020:

- Gatton Childcare Centre, which is owned and operated by LVRC, which noted that William Street is a key access route where increased traffic may occur and could affect pick/up drop off traffic
- Laidley State High School, which identified potential impact to bus routes/timetables due to projected construction routes, noting that three bus companies service the local schools and there is an opportunity to coordinate efficient changes to timetables. The school is very interested in opportunities for apprenticeships in construction phase
- University of Queensland, Gatton Campus which confirmed interest in opportunity for passenger rail services to Lockyer Valley
- Laidley District State School which identified concerns regarding the school's proximity to the proposed rail alignment including a grade separated crossing, and concerns regarding the potential for construction traffic to use Patrick Street or Railway Street which are used to access the school.

### **DSDTI and DESBT**

During July 2020, ARTC met twice with DSDTI (as then known) regarding their existing programs focused on working with major projects, and opportunities for Inland Rail to collaborate on elements of business capability development. ARTC will promote business capacity building programs provided by DSDILGP or the Department of Regional Development, Manufacturing and Water (DRDMW) to businesses interested in supplying the Project. The potential for a joint forum with other major projects in the Project region to provide information about a range of projects and their supply requirements was also identified. Further detail on Inland Rail's business capacity program is provided in Section 8.6.4.

A meeting with Brisbane DESBT staff in October 2019 to discuss Inland Rail and existing DESBT programs which may support skills and business development identified the RSIS program as a key opportunity for alignment with local priorities.

**6.3.11 Stakeholder issues summary**

Table 6-3 summarises key themes and issues raised by stakeholders, and where they are addressed in the SIA. Issues which are not addressed in the SIA include:

- Opposition to the Project’s location (which is addressed in EIS Chapter 6: Project description and EIS Appendix C: Consultation report)
- Specific recommendations regarding air quality management (which are addressed in EIS Appendix K: Air quality technical report)
- Potential for passenger rail inclusion as part of the Project (which is not part of the Project scope).

Stakeholder suggestions on mitigation measures are addressed in Section 8.1.4.

**Table 6-3 Issues raised by stakeholders addressed in SIA**

Impact area	Key issues for investigation	SIA Section
Amenity and character	Potential for homes to be affected by rail noise, vibration or dust during construction or operation	7.1.3 and 7.1.4
	Potential for construction activities to affect rural or town amenity	7.1.3, 7.1.5
	Potential for visual amenity to be adversely impacted by bridges or elevated structures	7.1.7
	Potential for coal dust to affect nearby properties if coal is transported on the rail line	7.1.4
	Potential for noise from crossing loop near Laidley to affect nearby residents’ amenity	7.1.4
	Impacts on rural amenity and character	7.1.6, 7.1.7
	Impacts on town centre amenity	7.1.5
	Impacts on Grandchester’s character and amenity, exacerbating existing disadvantage and flood-related trauma	7.1.5, 7.1.9
Property values	Concerns regarding Project effects on property values with potential for disadvantage to owners	7.3.3
Indigenous community interests	Impacts on native title interests or cultural landscapes, and need for cultural awareness	7.1.1
	Employment and business opportunities	7.2.1, 7.5.5
	The potential for cumulative housing demands from major project workforces to displace low income households	7.3.2
Land acquisition	Impacts of property acquisition (stress and disruption of families and community networks)	7.1.2, 7.4.6
	Impacts of property acquisitions on farmers and graziers, including land severance	7.1.2, 7.5.1
Connectivity	Impacts of Project construction and operation on connectivity, including access to businesses and facilities within towns	7.1.5, 7.1.10
	Impacts on traffic safety or school bus routes due to road re-alignments, construction traffic or level crossings	7.4.8
	Impacts on pedestrian connectivity	7.1.10, 7.4.1

Impact area	Key issues for investigation	SIA Section
Housing and accommodation	Effects on the amenity and capacity of Gatton Caravan Park	7.3.7
	Effects of construction workforce demands on local housing and short-term accommodation	7.3.4, 7.3.5
	Potential to impact on DCHDE properties	7.3.4
Impacts on farms and agriculture	Impacts of property severance on property use and access	7.1.2 and 7.5.1
	Biosecurity concerns through the accidental transfer of pests and disease	7.5.1
	Impacts on access to water, through damage to bores or Project use of water competing with farmers	7.4.5, 7.5.1
	Loss of small farms	7.5.1
	Potential for dams or bores to be disturbed	7.5.1
	Property values	7.1.2, 7.3.3
	Impacts on farming and grazing, including livestock management	7.5.1
	Potential for labour to be drawn from other businesses and industries	7.5.3
Impacts on community and health facilities	Proximity of Project construction and operation to churches, schools and community centres	7.4.1
	Increased noise at Gatton schools, and potential for noise	7.4.1
	Potential to affect access, noise levels and viability of Grandchester State School	7.4.1
	Potential to impact on the amenity of future planned schools	7.4.1
	Potential to impact on the use of Council parks	7.4.4
	Effects of construction on Gatton Showground and Gatton Bowls Club	7.4.4
	Existing traffic bottle-neck at Gatton Hospital which could be exacerbated	7.4.2
	Workforce demands impacting on the capacity of small hospitals to service local needs	7.4.2
	Impacts on the amenity and use of the Forest Hill and Grandchester community halls	7.4.1
	Increased demands on local health and emergency services, including delays to emergency service access	7.4.2, 7.4.3
	Potential to increase demands for mental health services	7.4.2, 7.4.6
	Close cooperation with the emergency services providers including disaster management coordinators	7.4.3 and 8.5
Community wellbeing	Impacts on firefighting access	7.4.8
	Acquisition of properties resulting in displacement of households from local communities	7.1.2, 7.1.8
	Potential to changes in flooding risks to affect homes, farms or roads (no impacts on Brisbane River Valley identified)	7.4.5
	Potential to exacerbate fire ant issues in the Lockyer Valley	7.4.5
	Potential for safety incidents in the tunnel to affect residents' safety	7.4.8
	Project-related stress and anxiety effects on mental health, in the context of existing effects of drought and flooding events on mental health	7.4.67.4.7

Impact area	Key issues for investigation	SIA Section
	Impact to quality of life due to noise	7.1.3, 7.1.4, 7.4.5
	Concern for community safety at level crossings	7.4.8
	Effects of changes to air quality as the result of dust, including coal transport	7.1.3, 7.4.5
	Project potential to impact on wildlife habitat, particularly koala habitat	7.1.4
Employment and training	Ensuring local communities benefit through employment and supply opportunities,	7.2.1, 7.2.5, 7.5.5
	Ensure local Indigenous people including Traditional Owners benefit from Project employment and skills development opportunities	7.2.3
	Potential for cumulative labour demands to result in labour being drawn away from other businesses and industries	7.5.3
Business benefits and impacts	Impacts on businesses in Forest Hill and Gatton	7.5.2
	Construction activities causing traffic delays and impacts on visual amenity of Lockyer Valley, affecting tourism	7.5.4
	Impacts of a rail line on the natural beauty of the Lockyer Valley, and potential to deter tourists	7.5.4
	Concern that rail noise or traffic delays will affect the amenity or access for tourism properties	7.5.4
	Interest in the Project's procurement model and how it will engage local businesses	7.5.5
	Difficulties faced by small businesses in accessing major Project opportunities	7.5.5
	Opportunities for Indigenous businesses to participate in the supply chain	7.5.5

## 7 Potential impacts

This section describes the potential for social impacts and benefits to occur as a result of the Project during 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 SIMP (refer Section 8) 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.

A draft Outline EMP has also been prepared for the Project as part of the EIS (refer EIS Chapter 23: Draft Outline EMP) and includes a summary of measures which will avoid or mitigate environmental and social impacts including the measures outlined in the SIMP. A CEMP will be prepared by the Contractor and will include detailed measures to manage potential impacts during construction.

This section includes identification of issues to be considered in the SIMP, the draft Outline EMP and the CEMP.

### 7.1 Communities

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 and liveability, 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.

The Project will have impacts for directly affected landowners (i.e. those whose land would be acquired for the Project), neighbouring landowners and other residents who may be exposed to noise during construction or operation, Councils, traditional custodians, community facility users, businesses and community members. Whilst all social impacts and benefits affect communities, this section focusses on changes which may affect community members' amenity and enjoyment of their environments, or impact on community values.

#### 7.1.1 Indigenous people's interests

As noted in Section 5.1.1, the EIS investigation corridor is primarily located on land within the Yuggera Ugarapul People's Native Title claim area. 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 within the EIS investigation corridor.

The EIS investigation corridor traverses one land parcel identified as Reserve tenure and six land parcels identified as State Land tenure, which may therefore be subject to Native Title rights. The NT Act prescribes a statutory process to enable native title holders and parties seeking use of land where native title may continue to exist to reach agreements about the use of that land.

Consultation with the Yuggera Ugarapul People as part of the Project's Aboriginal cultural heritage assessment found that the landscape in the SIA study area is important to cultural heritage and Aboriginal connections to Country. They were also concerned that the Project would harm wildlife and change the landscape, resulting in a loss of their ability to care for Country. ARTC has undertaken consultation and negotiation in accordance with Part 7 of the *Aboriginal Cultural Heritage Act 2003* (ACH Act) with the relevant Aboriginal parties for the Project. In accordance with the ToR and the ACH Act, Indigenous cultural heritage values and Project impacts to these values will be managed under approved Cultural Heritage Management Plans (CHMPs) developed with the relevant Aboriginal Parties for the SIA study area. ARTC has developed a CHMP with the Yuggera Ugarapul Party, which was approved by the Chief Executive of DATSIP on 5 June 2018.

Aboriginal Cultural Heritage will be protected and managed through agreed mitigation strategies following the Project Activity Survey undertaken by the Traditional Owners in line with the terms and conditions of the CHMP. Any imposed conditions of approval will be incorporated into the Cultural Heritage Sub-plan of the draft Outline EMP.

Employment opportunities and participation in the business economy are central interests for Indigenous community members. The Yuggera Ugarapul Aboriginal Party CHMP includes commitments to employment and business involvement. 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 (refer Sections 7.2.3 and 7.5.5).

### 7.1.2 Land acquisition

#### Acquisition process

The Project alignment has been designed to utilise the existing West Moreton System rail corridor for approximately 50 per cent of the length of the alignment, and where it deviates from the existing West Moreton System rail corridor, the Project predominately follows the protected Gowrie to Grandchester future State transport corridor. This has minimised the extent of 'new' properties to be acquired. Where land is required outside of the protected corridors, the corridor will be amended in consultation with DTMR, which will require acquisition of private properties and roads reserves.

Consultation with affected landholders has been central to understanding individual property's operational arrangements and the potential for Project impacts. ARTC has met with all affected landowners to identify their specific needs and concerns, and to provide information to assist property owners to identify their options for impact mitigation, management or offset.

Additional land required for the Project will mostly be acquired through a compulsory land acquisition process, also known as land resumption. The Queensland Government will own the rail corridor, and ARTC will lease the rail corridor for rail operations. Land for the rail corridor will be acquired by the Constructing Authority.

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 Project works. Land resumption processes in Queensland are undertaken by acquiring government agencies in accordance with the *Acquisition of Land Act 1967* (AL Act), which sets out the process for acquisition and the assessment of compensation.

Whether there is a part or full acquisition is determined on a case by case basis, depending on the land requirement, whether the boundary of the acquisition severs the principal building, and whether the landowner requests the balance of land to be taken.



Landowners are entitled to claim compensation for the acquisition of an interest in land that is taken in accordance with the AL Act. Compensation is assessed on an individual basis, based on the market value of the land that is acquired at the date of resumption. Additional compensation for disturbance caused by the resumption may also apply, and may include:

- Reasonable legal costs, valuation or other professional fees to prepare a claim for compensation
- Costs related to purchase of replacement comparable land, including stamp duty
- 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 may also apply.

The assessment of compensation is undertaken by a registered property valuer appointed by the Queensland State Government. Landowners 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.

If there is disagreement with the amount of compensation offered, landowners are entitled to obtain their own professional and independent advice regarding the amount of compensation. Disagreements are usually resolved through negotiation with valuation professionals, a mediation process, or if necessary, through the court process.

Landowners can also apply for an advance payment of compensation which does not affect the right to negotiate additional compensation at a later date, or to have the matter determined by the Land Court in order to reach a settlement.

### **Land acquisition impacts**

Between Helidon and Calvert, the permanent operational disturbance footprint traverses 193 properties and 36 easements.

The Project will directly impact upon approximately 488.44 ha of land. Of the 193 properties within the EIS investigation corridor which would be directly impacted:

- 23 properties are within the existing West Moreton System rail corridor, and are held by QR under a lease under the *Land Act* 1994 (Land Act) or are unallocated State land
- 57 properties are within the protected Gowrie to Grandchester future State transport corridor, including 54 freehold properties owned by DTMR, reserve land property and unallocated State land
- 113 properties are not in an existing or protected rail corridor, including 104 private freehold properties, leases under the Land Act, reserve land and unallocated State land. Five of the freehold properties have only a volumetric subsurface land requirement for the Little Liverpool Range tunnel.

Properties will be acquired in full, or partially acquired where feasible and agreeable with landowners however as noted above, 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 Project works, so the precise nature of full versus partial acquisitions is not yet known.

The permanent operational disturbance footprint will utilise the existing West Moreton System rail corridor for approximately 18 per cent of the area required for this footprint and will utilise the Gowrie to Grandchester future State transport corridor for approximately 17 per cent of the area required for this footprint.

Of land which is outside the West Moreton System rail corridor and within the permanent operational disturbance footprint, approximately 72.6 per cent is used for grazing native vegetation and 10.8 per cent

is used for irrigated seasonal horticulture. Residential land uses account for approximately 8.7 per cent of the land to be acquired (refer Table 7-1).

Engagement with directly affected landowners is being undertaken to hear and address concerns, and to understand the Project’s potential impacts relating to e.g. property access, property severance (where a severed parcel of land becomes a separate lot or parcel property use), noise impacts and water management, and to identify actions required to mitigate impacts on properties and their owners. Impacts on agricultural properties are discussed in Section 7.5.1. Further information about impacts on agricultural land use is provided in EIS Chapter 8: Land use and tenure and is further discussed in Section 7.5.1.

**Table 7-1 Land use within the permanent operational disturbance footprint and outside designated rail corridors**

Land use	Area (ha)	% of footprint
Grazing native vegetation	221.03	72.6
Irrigated seasonal horticulture	33.02	10.8
Residential	26.59	8.7
Services	11.29	3.7
Transport and communication	3.22	1.1
Other minimal use	2.97	1.0
Grazing modified pastures	2.03	0.7
Reservoir/dam	2.03	0.7
Land in transition	0.93	0.3
River	0.56	0.2
Cropping	0.34	0.1
Mining	0.34	0.1
Irrigated perennial horticulture	0.06	0.0
<b>Total</b>	<b>304.41</b>	<b>100.0</b>

The temporary construction disturbance footprint, which also covers the permanent operational disturbance footprint, traverses 341 properties and 37 easements. In identifying the properties to be temporarily utilised for activities associated with the construction of the Project, consideration was given to:

- Properties already owned by DTMR
- Utilisation of properties which will be severed or alienated by the permanent operational disturbance footprint
- Alignment with property boundaries
- Access to main roads
- Avoidance of intensive livestock or cropping land uses, and environmentally sensitive areas.

Where possible, laydown areas will be located within QR’s West Moreton System rail corridor and/or on DTMR-owned land. Land which would be used during construction includes 26 freehold properties as well as land lease, reserve and road reserve uses. Where land is required only for the construction phase, it may be leased or licenced from landholders, or occupied temporarily in accordance with the AL Act.

Where the Project proposes to utilise land temporarily for construction, there is potential to disrupt existing operations on these properties during construction. This will be addressed as part of the lease. licence or compensation agreements with landowners

**Relocation of households**

Of the 193 properties within the permanent operational disturbance footprint, at least 23 properties are likely to be wholly acquired, including properties with a total of 19 houses. Partial acquisitions would be required for the remaining properties, including five properties where volumetric tenure is required.

Of the freehold properties owned by DTMR that would be impacted (acquired by DTMR prior to or during the EIS process as part of early acquisition processes associated with the Gowrie to Grandchester future State transport corridor), approximately seven are currently tenanted (located in Helidon, Gatton and Laidley) and would need to be vacated.

Together, the expected full acquisitions could lead to the relocation of approximately 26 households from the EIS investigation corridor (comprising 19 households of privately owned properties and 7 households renting DTMR-owned houses). This is summarised in Table 7-2.

**Table 7-2 Project land use requiring relocation of households**

Tenure type	Households
Tenanted properties owned by DTMR within protected rail corridors	7
Estimated full acquisition of freehold properties with dwellings	19
<b>Total</b>	26

The final number of full and partial acquisitions will be determined in consultation with affected landowners during the next phase of the Project, which will then determine the number of households who would need to relocate as the result of land acquisitions. Additional properties may also be acquired where Project impacts (such as operational noise) cannot be avoided or appropriately mitigated, and/or acquisition is agreed upon in consultation with affected landowners.

Consultation with landowners who would need to relocate indicates that they are already experiencing impacts including:

- Stress generated by the acquisition process, including uncertainties about the timing for relocation
- A compromised ability to sell their property or make improvements due to uncertainty about the Project and its impacts
- Anxiety about the ability to replicate their current lifestyle and circumstances in another area.

Land acquisitions will result in:

- The need for approximately 26 households to relocate, and consequent disruption to lifestyles and social connections
- Distress for residents having to leave their properties and neighbourhoods
- Disruption to lifestyle and social links, e.g. neighbourhood networks social and sporting activities, and potentially school enrolments

Volumetric acquisitions may result in some residents feeling concern about the existence of a tunnel under their land. Concern regarding the implications of volumetric acquisitions and any Project impacts is being addressed through consultation with affected landowners and provision of information about the acquisition process and compensation arrangements. The minimum depth of cover above the tunnel in this area would be approximately 90 m and as there is no likelihood of impacts on property amenity or use, volumetric acquisitions are unlikely to result in any other impacts on households.

### **Support for affected residents**

ARTC is developing interface agreements with all directly affected landowners to provide the framework for ongoing engagement and mitigation of property-specific impacts.

ARTC's strategies to reduce the impacts of property acquisition on landowners and their families include:

- Meeting with all directly affected landowners and tenants who would need to relocate as the result of the Project's land acquisitions, to identify their specific needs and concerns, and refer them to services which can support them during the relocation process
- Establishment of a partnership with the Darling Downs and West Moreton Primary Health Network (PHN) to provide mental health services in the SIA study area
- Provision of funding for community organisations (potentially brokered by the PHN) that can provide community and individual support services to support people with their relocation and adjustment to new circumstances.

The Construction Authority will advise the seven households who are tenants of DTMR properties of the timeframe for their relocation. These households may relocate to private rental housing, however during the detailed design phase the Project will offer these households the opportunity to identify a need for support and liaise with DCHDE to enable DCHDE to consider households' needs and housing options if a need for support is required.

### **7.1.3 Environmental impacts during construction**

#### **Noise**

The potential for noise impacts on homes near the EIS investigation corridor as the result of Project construction or operation was a key concern for community member, who were concerned that it would affect the amenity of their homes, businesses and community facilities.

Assessment of construction noise and operational road traffic noise is presented in EIS Appendix O: Noise and vibration (construction, fixed infrastructure and operational road noise) technical report. A conservative assessment based on the worst case 15-minute period of construction activity was undertaken, noting that the number of sensitive receptors (homes and facilities) affected at any one time will vary depending on the location of activities and progress of works along the alignment.

Noise would result from earthworks, laydown areas, construction of structures such as bridges, drainage works, rail civil works and road civil works. The assessment identified very large numbers of sensitive receptors which would experience exceedances during both standard and non-standard working hours, e.g. 1,496 receptors where noise from earthworks would exceed the upper noise limits during standard hours, whilst the activity is occurring near sensitive receptors. This would impact on the amenity and liveability of homes whilst noise impacts are occurring. Night works if conducted were predicted to cause noise which would exceed sleep disturbance criteria, however track possessions, deliveries to construction sites, tunnelling and transport of spoil are the only currently proposed night works.

Construction noise would affect up to 19 community facilities (including health facilities) and up to 13 educational facilities (early years education and schools) including in Helidon, Gatton, Forest Hill, Laidley and Grandchester. Construction traffic noise is also predicted to exceed the criteria for ten roads.

Ground-borne noise due to tunnelling using a roadheader has been predicted to exceed the ground-borne 'Dwellings – Standard hours' noise criteria for 29 sensitive receptors and could exceed the 'Dwellings – Non-standard hours' criteria for 39 sensitive receptors, whilst tunnelling is occurring near sensitive receptors.

In summary, it is highly likely that the amenity of homes, community facilities and education facilities could be affected by noise whilst construction activities are near homes, requiring a range of mitigation measures. Noise management and mitigation measures will be detailed in the Construction Noise and Vibration Sub-plan to the CEMP. As outlined in the draft Outline EMP (refer EIS Chapter 23: Draft Outline Environmental Management Plan), measures will 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.

Sensitive receptors identified in the Noise and Vibration Sub-plan, as well as residents and business owners within at least 2 km of the disturbance footprint and other relevant stakeholders, are to be provided with sufficient information to enable them to understand the likely nature, extent and duration of noise and vibration impacts during construction. Construction progress and upcoming activities will be regularly communicated to local residents, businesses and other stakeholders, particularly when noisy or vibration generating activities are planned, such as vibratory compaction and piling.

Notwithstanding implementation of management and mitigation measures, some residents will experience construction noise as intrusive on the amenity of their homes, businesses, outdoor spaces and community facilities including schools, and there is potential for effects on lifestyle as a result, including decreased enjoyment of outdoor activities, or the need to keep windows shut to minimise noise.

Mitigation of construction noise impacts on schools and childcare centres will require particular attention, in close consultation with the Department of Education, to develop and refine noise mitigation. This consultation has commenced and will continue throughout the process of detailed design, to avoid negative impacts on the learning environment of schools and childcare centres.

### **Vibration**

Works which will create vibration (e.g. piling and vibratory rolling) will be undertaken as part of construction. Without mitigation, lower night time vibration human comfort limits could be exceeded at dwellings adjacent to the EIS investigation corridor as the result of construction activities.

Minimum working distances have been recommended as part of the EIS Appendix O: Noise and Vibration (Construction, Fixed Infrastructure and Operational Road Noise) Technical Report, in order to comply with the cosmetic/structural damage and human discomfort criteria. Other mitigation recommended includes avoiding concurrent operation of vibration intensive equipment where possible, use of alternative equipment within the minimum working distances and vibration monitoring. This is expected to minimise the potential for vibration to cause annoyance to nearby residents, and to avoid damage to structures.

Roadheaders are expected to be used to construct the Little Liverpool Range tunnel, which would pass under and near homes in the Range Crescent/Kessling Drive neighbourhood between Laidley and Grandchester. The depth of cover under homes on the Little Liverpool Range would be approximately 90 m. Tunnel construction is expected to result in vibration levels that are predicted to exceed the lower limit for dwellings during non-standard working hours (0.3 mm/s) criteria at approximately 10 properties, for the short periods when tunnelling would occur near dwellings. If vibration is perceptible to residents, it may result in a minor, short-term nuisance for affected residents. The risk of damage to buildings from vibration was assessed as low (refer EIS Appendix O: Noise and vibration (construction, fixed infrastructure and operational road noise) technical report).

### **Blasting**

There are five locations that have been identified as part of the design phase that may require blasting along the Project alignment, including two locations as part of tunnel construction and three locations as part of track construction (north-east of Helidon, north of Grantham and east of Laidley). The following measures would be implemented where feasible and reasonable to minimise blasting impacts:

- Reducing the charge size by use of delays and reduced charge masses
- Ensuring adequate blast confinement to minimise the amount of overpressure
- Avoiding secondary blasting where possible
- Avoiding blasting during heavy cloud cover or during strong winds blowing towards sensitive receptors
- Establishing a blasting timetable through community consultation for example, blasts times negotiated with surrounding sensitive receptors.

This is expected to reduce the potential for stress relating to unexpected blasting and the potential for temporary noise impacts on amenity relating to blasting.

### **Dust**

Residents living near the Project are concerned that earthworks, track construction, construction traffic or activities at laydown areas will result in dust affecting air quality or settling on outdoor areas, roofs, and in water tanks. It was noted that there is typically more dust during harvest periods and that Project-related dust could worsen this.

Sensitive receptors for air quality include residential dwellings, rural dwellings, agricultural land and protected areas, as well as surfaces that direct water to potable water tanks. Dust sources during construction will be variable, and impacts will differ according to the proximity of construction activities to homes, businesses and facilities. Emissions from vehicles and fixed plant are also likely.

The results of air quality risk assessment for the Project (EIS Appendix K: Air quality technical report) indicate that the unmitigated air emissions from the construction phase of the Project pose a low risk of human health impacts, but a high risk of dust soiling, requiring that suitable management measures to control dust must be implemented during construction. The assessment found that with implementation of the proposed mitigation measures including notification of significant works with potential for dust nuisance, community engagement and complaints procedures, the residual impacts will be 'not significant' in regard to dust soiling and human health impacts. On this basis, impacts on residential amenity and the liveability of properties are not anticipated as the result of changes to air quality.



Proposed construction mitigation measures for working in close proximity to sensitive receptors include (refer draft Outline EMP):

- 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.

Notwithstanding, dust may cause a nuisance to homes business and facilities requiring proactive communication about works which may cause dust, and a responsive complaints procedure (refer Section 8.2).

ARTC will also consult with residents adjacent to the temporary construction disturbance footprint to ensure that dust and emission controls during construction take account of specific concerns (e.g. people with asthma or respiratory illnesses).

Community concerns about the potential for concentrations of PM<sub>2.5</sub> (small particles such as those found in diesel emissions) to affect community health are noted in Section 7.4.5 and discussed in detail in EIS Appendix K: Air quality technical report.

### **Laydown areas**

The Project's construction will require a total of 32 laydown areas along the alignment, used for storage, management and distribution of materials. Laydown areas would include areas associated with bridge construction, tunnel construction, track, culvert and ballast construction.

A map showing the locations of laydown areas is provided in EIS Chapter 6: Project description at Figure 6.4. The majority of laydown areas would be located on grazing land or land used for services with minimal potential to affect amenity, however laydown areas are also required in Gatton, Forest Hill, and Grandchester.

One laydown area at Warrego Highway South may include a concrete batching plant and a second (at the Warrego Highway Truck Stop and Eastern Drive) may include a flashbutt welding site, which includes large sheds containing machinery and hardstand areas used to weld sections of track together.

Laydown areas in towns have potential to impact on local amenity through noise or dust. Residents living on roads from which laydown areas would be accessed would also experience increased traffic. 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 used by the Project. Laydown areas may also temporarily affect the rural character of the roads on which they are located, and tunnel construction laydown areas are likely to be visible from the surrounding ridges (e.g. Range Crescent).

Following construction, laydown areas and demountable buildings used during construction will be progressively decommissioned and the area rehabilitated as their use is completed. Some office facilities may be left within the railway corridor for the commissioning phase. There is also potential for some laydown areas to be left in place for their legacy value to landowners or businesses. This will be determined as part of ongoing engagement with local stakeholders.

## Bridge construction

The Project requires 31 new bridge structures as described in Section 4.1.6, including:

- Thirteen rail-over-waterway
- Six rail-over-waterway-and-road
- Six rail-over-road
- Four road-over-rail
- One rail-over-rail
- One pedestrian-over-rail.

This includes works to the road bridge on Eastern Drive in Gatton to reinstate or reconstruct the infrastructure and replacement of the existing Gatton Station Pedestrian Footbridge.

Bridge construction will require establishment of laydown areas on either side of the bridge, earthworks, piling, delivery of concrete, steel and other supplies, construction of foundations and the bridge deck, and roadworks to link the bridge to the road network. This is likely to cause significant noise in areas near bridge construction sites. Vibratory rollers and plant such as piling rigs and hydraulic hammers for bridge construction may also result in perceptible vibration impacts.

Noise, vibration, traffic or dust impacts from construction of major structures such as waterway and road crossings have the potential to impact on residential amenity for extended periods.

The Project will communicate with all residents adjacent to and within 250 m of Project works for bridge 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 vibration
- Advise on how long construction work will be heard or seen for each property
- Provide 24-hour contact details for Project representatives.

## Quarries

The operation of quarries (extraction of rock, soil, gravel or sand) has the potential to impact on the amenity of nearby neighbours through creating noise, dust or increases in the number of heavy vehicles using local roads. Borrow pits are not required for the Project.

The Project's use of existing licenced quarries is not expected to affect the amenity of nearby landowners, however an increase in truck movements will result on access roads to the quarries.

### 7.1.4 Environmental impacts during operations

#### Noise and vibration

Stakeholders in affected communities were concerned that rail noise could affect their quality of life or cause sleep disturbance. Stakeholders were also concerned that the operation of crossing loops would result in noise impacts as trains idle. EIS Appendix P: Operational railway noise and vibration technical report details the assessment of potential noise and vibration emissions associated with the Project's operations and its potential to impact nearby communities.

The assessment indicates that noise from the Project's operation would affect rural dwellings outside of the main townships, as well as some dwellings in:

- Gatton, e.g. Hickey Street, Crescent Street and Chadwick Road
- Laidley North e.g. Cunningham Avenue, Hardy Drive and Francis Road
- Forest Hill (several streets)
- Grandchester e.g. Ipswich Road and School Road
- Calvert, e.g. in Gipps Street.

The assessment presented in EIS Appendix P: Operational railway noise and vibration technical report indicates that a review of feasible and practicable noise mitigation measures at approximately 285 sensitive receptors at Project opening (2026) and an additional 30 sensitive receptors at 2040.

The assessment of operational noise indicates that for Year 1 of operations, of the 285 sensitive receptors triggering the assessment criteria, 142 were within the 1 dB(A) to 3 dB(A) range; 48 were within the 3 dB(A) to 5 dB(A) range; 61 were within the 5 dB(A) to 10 dB(A) range; and, 34 were greater than 10 dB(A). The highest prediction was noted to be up to 17 dB(A) above the night time assessment criteria.

Ground-borne noise is also possible within approximately 50 m of the Project, and whilst likely to be masked by airborne noise, EIS Chapter 15: Noise and vibration notes that this will need to be reviewed during the detailed design phase to verify any future requirements to mitigate ground-borne noise.

The contribution to noise levels from the trains idling at the crossing loops were determined to not be a primary influence on noise levels.

Noise and vibration mitigation measures for the Project follow the hierarchy of noise control options, i.e. control of noise and vibration at source, controlling the pathway for noise to reach the receptors, and control of noise impacts at the receptors. The assessment of operational noise and vibration recommends consideration of concept noise barriers where there are groups of affected receptors (noting that this will not be feasible for isolated, individual properties).

In Gatton, Laidley and Forest Hill, the predicted noise levels and location of the sensitive receptors triggered an investigation of concept noise barriers. The concept noise barriers are being considered in relation to dwellings on Hickey Street in Gatton, and to control noise levels at the Gatton Caravan Park. Concept noise barriers are also being considered for Railway Street and Gordon Street in Forest Hill, and both north and south of the corridor between Old Laidley Forest Hill Road and the Valley Vista estate in the Laidley area.

Concept noise barriers would be effective for the majority of dwellings in these streets, but this may exclude a small number of dwellings where barriers would not be effective due to gaps between the concept noise barrier sections due to the local road network.

Concept rail noise barriers can also create impacts, including changing views from dwellings, and potentially blocking breezes. If ARTC includes noise barriers in the scope of the Project's detailed design, Appendix P: Operational railway noise and vibration technical report notes that further analysis of design and engineering factors to determine the location, extent and height of the concept noise barriers will be required. This will include consultation with residents adjoining locations where concept rail noise barriers are being considered.

Where noise mitigation is required at triggered receptors, and where noise levels are not controlled with concept noise barrier options, the feasible and reasonable options for noise management are expected to be limited to architectural acoustic treatments (such as increased glazing or facade treatments) to control rail noise within buildings, and/or upgrades to any existing property boundary fencing to improve screening of rail noise levels. EIS Appendix P: Operational railway noise and vibration technical report provides discussion on other noise management and mitigation measures that will be considered as part of ARTC's review of feasible and reasonable noise mitigation during the detailed design and construction of the Project.

With respect to ground vibration levels from rail freight movements, the assessment confirmed that the Project is not expected to result in vibration that would exceed the vibration criteria for human comfort impacts, and would be well within vibration levels to manage the potential for damage to building contents buildings. Ground vibration is also a potential source of ground-borne noise. The assessment found that at a distance of approximately 45 m from the track, the most stringent ground-borne noise criterion would be achieved. However, the calculated ground-borne noise levels potentially resulting from the movement of freight trains through Little Liverpool Tunnel may trigger an investigation of feasible and reasonable mitigation options for six receptors.

As for the construction phase, but with longer-lasting effects, noise from the Project's operation may be experienced by nearby residents as intrusive. There is potential for noise to affect quality of life by interrupting conversations or social activities, causing sleep disturbance, or the enjoyment of outdoor activities. Where residents experience rail noise as intrusive on daily activities, they are likely to feel stressed and angry, whilst sleep disturbance can have a range of effects on health. This is further discussed in Section 7.4.5.

### **Air quality**

Nearby residents are concerned that dust (including coal dust) or diesel emissions from the Project's operation may affect their amenity or health during operations. The results of the air quality risk assessment for the Project (refer EIS Appendix K: Air quality technical report) indicate that compliance with air quality goals has been predicted for all pollutants of concern. ARTC will require rail service operators to apply a veneer coating to loaded coal carriages transported on the rail line, to prevent the release of coal dust.

Community concerns regarding the effects of emissions on health are discussed in Section 7.4.3.

### **Tunnel operation**

The operation of the tunnel through the Little Liverpool Range will require venting of air and emissions within the tunnel from its southern portal. The tunnel would be naturally ventilated, with no outlet building required.

Air quality assessment (Appendix K: Air quality technical report) indicates that tunnel venting would not worsen air quality for any sensitive receptors, however, concerns about air quality may be experienced by nearby residents. ARTC will communicate with residents in this area to ensure they are aware of the air quality impact assessment findings, and to address any concerns they have regarding air quality and health risks.

### **Wildlife**

The potential for impacts on wildlife, including koalas, was raised as a concern in community information sessions. ARTC consultation regarding flora and fauna assessment included:

- Three community workshops (with attendance ranging from six people to 14 people) to discuss the flora and fauna assessment methodology, potential impacts on flora and habitat, and mitigation

- A Technical Advisory Group (Government agencies) meeting to discuss the assessment methodology and outcomes.

The Project's potential impacts on terrestrial and aquatic ecology are assessed in detail in EIS Appendix I: Terrestrial and aquatic ecology technical report, which describes the potential to impact on flora and fauna (predominantly during the construction phase) e.g. through habitat loss, change, or fragmentation, injury to fauna, displacement of flora and fauna by weed and pest species, noise, or barrier effects (i.e. changing fauna's movement patterns).

The Project alignment will be fenced with three or four strand barbed wire fence where the alignment occurs within the West Moreton System rail corridor, reflecting the largely agricultural land use and providing a barrier between the rail line, people and animals.

Fauna fencing and fauna crossings to facilitate safe and effective movement of fauna will be provided where a risk of population fragmentation occurs (refer EIS Chapter 6: Project description). Vegetation within the alignment will also be removed in these areas to ensure that fauna is not encouraged into the active track area. Where there is a high presence of koala movements within an area, fauna fencing will need to be designed as koala fencing.

Appendix I: Terrestrial and aquatic ecology technical report provides a suite of management measures to avoid or reduce impacts on flora and fauna. Compensation in the form of compensatory habitat, land rehabilitation and/or contribution to research are also identified as offsets to account for the residual impacts potentially resulting from the Project.

#### **7.1.5 Town centre amenity**

Town centres are integral to amenity and quality life in local communities, with shops, schools, churches, community centres, recreational facilities and parks clustered for convenience and mutual support. Residential dwellings closest to the Project have the most potential to experience amenity impacts, however there is also potential for impacts on businesses or community facilities.

Noise was the most frequently cited concern raised in consultation; however, community members were also concerned that amenity would be impacted by a combination of environmental changes including noise, dust, interruptions to traffic flows, lighting and reduced cross-town connectivity.

Impacts on town centre amenity are discussed below.

##### **Helidon**

The Project deviates from the West Moreton System rail corridor north-west of Helidon and passes approximately 200 m to the north of the nearest homes. The Project would not cause severance within the township, but the rail corridor and freight train movements will be visible and would be experienced by some residents as a detraction from the town's character.

Construction noise is likely to affect the amenity of homes closest to the EIS investigation corridor. There is also potential for freight rail noise to be heard in town, however this is not expected to interfere with daily activities or the enjoyment of public spaces.

The Project will require closure of Seventeen Mile Road, which would impact on road access from Helidon to the north-west, however other routes are available to access the Helidon town centre, Lockyer Valley National Park and quarries which are currently accessed from this road.

##### **Gatton**

The Project crosses Laidley Creek, and passes through Gatton and the northern side of the existing Gatton rail station.

Gatton residents have expressed concerns about the impacts of the Project's construction and operation on the character and connectivity of the town.

Construction within the EIS investigation corridor and use of the laydown areas is likely to introduce noise, heavy vehicles and potentially congestion in and around Gatton, with the Gatton Bowls Club, Gatton Caravan Park, Assembly of God Church and homes near the disturbance footprint likely to be affected. Acquisition of Apex Park on Chadwick Street is likely to be required for re-alignment of Golf Links Drive (refer Section 7.4.4). Community facilities including the Gatton Racecourse, Peace Lutheran Primary School, Gatton Showground, Gatton State School, Cahill Park and Gatton Jubilee Golf Course are also in close proximity to the Project which is discussed in detail in Section 7.4.1.

The Lockyer Valley Residential Village, a 64-home site village planned for Beavan and Byrne St in Gatton may experience construction noise and traffic disruption (if built).

During construction, laydown areas would be required west of Lockyer Creek, between Crescent Street and the West Moreton System rail corridor, and adjacent to the eastern boundary of the Gatton Caravan Park.

The Project crosses the following roads within the Gatton township:

- Burgess Road
- Smithfield Road
- Old College Road
- William Street-Gaul Street
- Eastern Drive.

Rail over road overpasses would be constructed at Smithfield Road and Beavan Street to the west and Spencer Street-Eastern Drive to the east, and the West Moreton System rail line would be upgraded to ARTC and Project specifications. This would change the appearance of the town centre from its approaches, and the addition of additional infrastructure (such as fencing and signage) will intensify the appearance of the rail corridor as a barrier through town.

The closure of Gaul Street would also be required. Gaul Street is a local connector between neighbourhoods north of the EIS investigation corridor to the Gatton town centre, and local residents and businesses in Gatton identified a reduction in connectivity within Gatton as a result. A level crossing is proposed for the Gaul Street road/rail interface point, which would enable pedestrian connectivity. Road diversions are proposed at the Burgess Road and Old College Road road/rail interface points, which would result in traffic delays during construction and operations.

During operations, the Project would result in an increase in the number of train movements, and an increase in the size and length of trains using the rail line, with a consequent increase in the frequency of rail noise including horns as required by safety regulations, and interruptions to north-south movements across town.

As grade separation is proposed at the Smithfield Road and Eastern Drive road/rail interface points, permanent impacts on the surrounding road network will be minimised.

Collectively, noise, traffic disruptions and works which would detract from the scenic character are likely to impact on town centre amenity during construction. Operational noise would also affect the amenity of buildings and open spaces closest to the rail line during operations while trains are passing through town.



## **Forest Hill**

Construction works in the small town of Forest Hill will include track construction and realignment of Gordon Street and Glencore Grove Road, however there would be no laydown areas in or near the town. Construction noise and increased traffic are likely to affect the amenity of the town while works are occurring here, which may discourage locals and visitors from visiting the town centre and would affect the town's quiet ambience.

The Project crosses Dodt Road (which will be provided with an active level crossing) and Hunt Street (which would be closed, with access maintained via other routes). Construction in these areas may result in localised noise and dust impacts on the amenity of nearby homes.

Changes to the road network in Forest Hill to accommodate the Project include moving the level crossing from Hunt Street to align with Glencore Grove Road, which may result in reduced traffic on Victoria Road, through the business centre. Forest Hill businesses anticipate that road network changes would lead to reduced traffic in Victoria Street and therefore decreased trade, commencing during construction due to noise, dust and traffic delays, and continuing during operation.

The Forest Hill town centre, State School and the majority of homes are located south of the alignment. Within the town centre, the Forest Hill Hotel and the Lockyer Valley Hotel, (local meeting points and tourism attractors) and a Memorial Park are adjacent to the alignment. The Forest Hill Community Hall and Furley Park which includes clubhouses, sport fields and established community markets are located north of and adjacent to the Project disturbance footprint.

Similarly to Gatton, the Project would intensify the rail corridor as a barrier within Forest Hill, interrupting north-south movement through the town whilst trains are passing level crossings.

Operations are also likely to introduce rail noise including locomotive and track noise and the use of horns, which may interrupt conversations, business transactions and sporting activities.

Council officers have expressed concerns for the sustainability of Forest Hill when the Project is operational due to this combination of impacts. Impact mitigation will require an ongoing collaborative approach with strategies assigned to the relevant stakeholders or addressed through partnerships between ARTC and stakeholders.

## **Laidley**

It is unlikely that the Project will directly impact on amenity, traffic movements or the scenic character of Laidley township as it is located approximately 1.2 km to the north of the town.

The EIS investigation corridor crosses Laidley-Plainland Road, with the likelihood of traffic delays whilst a grade separated crossing is constructed, but no permanent impacts to accessibility into the Laidley township are anticipated.

The Project is predominantly within the Gowrie to Grandchester future State transport corridor but extends beyond the protected corridor when traversing the Valley Vista Estate in Laidley North, and some residential land within the Estate will be affected by the EIS investigation corridor.

## **Grantham**

Near Grantham, the Project is located adjacent to the Warrego Highway, along the northern boundary of the Grantham Reconstruction Area, and does not pass by residential properties or community facilities located within the Grantham township. The Project will not have a direct impact on the land use of properties within the Grantham township and is not expected to compromise the objectives of the Grantham Reconstruction Area Development Scheme (refer EIS Chapter 8: Land use and tenure).

The Project would be located approximately 600 m from the nearest houses; however, the Grantham community includes people who have been traumatised by flood events and may be particularly sensitive to environmental stressors such as noise and changes to the environment. This will require particular attention as part of the Project's community engagement process, prior to and during construction.

### **Grandchester**

The Project's location within Grandchester is a cause of significant concern to community members who fear that noise and disruption of north-south connectivity between facilities and homes will affect their amenity and the town's cohesion. The heritage value of the Grandchester Railway Station was also noted, and this is discussed in EIS Appendix S: Cultural heritage survey report.

The Project will use land located to the south of the Grandchester town centre and to the south of the West Moreton System rail corridor, in order to reduce the severance of grazing and cropping land and remove the need for a high embankment through the township. This will reduce the potential for noise, vibration, visual and air quality amenity impacts in town, but will require land acquisition to the south of Grandchester and will introduce freight rail noise which may impact on the amenity of rural residential properties. A large laydown area would be required between the Project and School Road, which would detract from the scenic character of Grandchester during construction.

The Project crosses Grandchester Mount Mort Road south of the Grandchester township. A level crossing is proposed at the road/rail interface point, so accessibility impacts for local traffic and increased travel times due to waiting at the level crossing may occur. This is a source of significant concern for local residents, who fear that travel delays will affect the town's connectivity (refer Section 7.1.10).

The Project would be located 200 m north of the Grandchester State School, intensifying the rail corridor as a visual and physical barrier between the school and the rest of the town.

There is potential for construction noise impacts to affect the school, necessitating the implementation of site-specific noise mitigation which may include relocation of the school (within its current site) to preserve its learning environment. This will be confirmed in consultation with Education Queensland and the Grandchester State School community. The Project will also sever a large Council reserve (School Road Park) to the north of School Road, however connectivity between the school and the remainder of the park would be maintained.

During operations, there is potential for the Project's built form and the increased frequency of trains and rail noise in Grandchester to affect its peaceful character.

ICC held particular concerns that Grandchester's historic character would be affected by construction noise, road works and the appearance of construction sites, and noted the importance of Grandchester as a departure point to the Spicers Retreat and other nearby attractions. ARTC will consult with ICC about the need for a local area planning process to address the significant changes that would be experienced in Grandchester, including a focus on managing impacts on the town's character during construction and operation.

### **Calvert**

The Project is located within the existing West Moreton System rail corridor as it traverses land to the north of the Calvert township. As the Project utilises the West Moreton System rail corridor, direct impacts to land use will be minimised, but there is potential for noise to affect the amenity of properties closest to the alignment.

The permanent operational disturbance footprint traverses Gipps Street within the Calvert township, requiring a level crossing which will result in traffic delays as trains pass.

### **Mitigation measures**

The Project's construction and operation are likely to result in impacts on the amenity of the Gatton and Forest Hill town centres, and result in noise, traffic disruptions and impacts on the scenic amenity in Grandchester.

Measures which address noise and dust impacts are summarised in Section 7.1.3 and 7.1.4. Measures to address impacts on traffic access during construction include:

- A TMP will be prepared prior to construction. This plan will identify the impacts that construction traffic (including workforce commuting) is likely to have on the local transport infrastructure and road users and detail ameliorative measures required to avoid, reduce or mitigate all identified impacts of the project. The Plan will be developed in consultation with DTMR, relevant local governments and emergency services.
- Ongoing consultation with local councils/DTMR and asset owners will be undertaken to ensure proposed access arrangements are suitable
- The TMP will be reviewed periodically.

Management measures addressing character and visual amenity are summarised in Section 7.1.7.

During the remainder of the EIS phase, the Project will progress discussions with LVRC with respect to mitigation of impacts on Gatton and Forest Hill, and with ICC with respect to Grandchester. ARTC will consult with Councils on the measures provided as part of the draft OEMP and draft SIMP, and will incorporate their feedback including suggested detailed/refined measures as part of the final EIS. This will address:

- For Gatton, measures to support pedestrian connectivity within the town centre and protect and enhance the amenity of residents, businesses and community facilities, which would include investment in community facilities and/or parks, and is likely to include the requirement to offset the loss of Apex Park
- For Forest Hill, Project support for a local area planning process to identify current (pre-Project) and Project-related challenges to the sustainability of businesses and the amenity of community facilities, and identify and implement measures to support businesses and enhance the amenity of community facilities during the construction process
- For Grandchester, discussion of proposed measures to protect the town's scenic character during construction (refer Section 7.1.7), enhancements to community facilities, and offsetting the severance of the School Park Reserve.

ARTC has committed to the development of a Community Wellbeing Plan in cooperation with LVRC, ICC and other stakeholders during the detailed design phase which will encompass agreed mitigation measures which are not already addressed in the CEMP, TMP or other environmental management plans.

#### **7.1.6 Rural residential amenity**

Rural and rural residential landowners are concerned about the potential for construction and operational noise or visual impacts to affect the amenity of their homes and properties.

During construction, noise from laydown areas and the rail corridor may be audible at rural residential homes, and construction works would detract from rural and natural scenic character in some areas. Restricted property access may also occur during construction whilst rail crossings or road re-alignments are constructed.

Within the existing West Moreton System rail corridor (through Placid Hills, Gatton, Lawes, Forest Hill, Valley Vista Estate, and Laidley North) the Project represents an intensification of the West Moreton System rail corridor's physical structure, and with respect to the frequency of rail noise generated.

The Valley Vista Estate includes approximately 179 residential lots, with approximately 46 homes completed and a few currently under construction. The majority of the existing homes would be affected by operational noise impacts, requiring mitigation. The total number of lots to be developed within the Valley Vista Estate is subject to the owner's commercial decisions and engineering considerations such as drainage issues. Potential impacts include the acquisition of residential land which may have been developed in future and the potential for a very small number of residents to relocate as the result of land acquisition. The Constructing Authority will negotiate compensation agreements for the acquisition of private land.

In the Range Crescent area, residents are concerned that the construction of the Little Liverpool Range tunnel may result in vibration impacts whilst the tunnelling construction works are occurring under homes. As noted in Section 7.1.3, any vibration felt by residents would be minor, would last for a short period, and would be mitigated in line with the draft Outline EMP. As such, vibration as the result of tunnelling are expected to result in only minor and short-term annoyance to affected households.

Buildings would be required at each tunnel portal to accommodate operational infrastructure e.g. an electricity substation, tunnel drainage management infrastructure, and tunnel control/emergency response activities. Buildings at the portals may be visible to residents living on nearby ridges, which could be experienced as a detraction from the natural landscape. ARTC will communicate with residents to whom the buildings would be visible, to explain their purpose and address any concerns about the operational activities housed by the buildings.

During operations, the Project's embankments and bridges are likely to impact on the character of rural and rural residential areas due to increased noise, vibration, and changes to views and vistas. Areas where the Project is close to rural residential areas and would introduce a source of noise during operations include:

- Helidon, where homes are within approximately 200 m of the Project
- Helidon Spa, with homes within 200-400 m of the Project
- East of Helidon, with rural residential blocks adjacent to the EIS investigation corridor along Connors Road
- Placid Hills, northeast of Grantham, where the Project would border rural residential properties
- Homes within the Valley Vista Estate at Laidley North
- Homes to the south of Grandchester
- Larger rural blocks with rural lifestyle pursuits near Calvert.

Where noise levels are predicted to affect residential amenity or cause potential intrusion, EIS Appendix P: Operational railway noise and vibration technical report has recommended mitigation measures including concept noise barriers where clusters of homes would be affected, and architectural treatments for individual dwellings. There is however potential for rail noise to affect enjoyment of some properties, particularly outdoor areas, regardless of mitigation.

In combination, changes to visual amenity, the noise environment and local connectivity are likely to detract from the amenity of rural residential areas in close proximity to the Project.

During the detailed design process, ARTC will undertake specific engagement with people living within adjacent to the Project and with land owners where noise or access restrictions are expected, 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 impacts on visual amenity.

### 7.1.7 Local character and identity

Residents of potentially impacted communities described the SIA study area's character - which includes quiet but active towns, scenic natural and rural landscapes, high value food production areas and wildlife habitats - as central to local identity. Changes to local character may affect community identity (how the community sees itself) or sense of place (the feeling of connection and belonging to a place). The existing rural and natural character also supports a range of tourism experiences and attractions.

#### Construction

Changes to local character and sense of place may commence during pre-construction, with clearing of vegetation for laydown areas, the corridor and access tracks. During construction, residents may experience works within the EIS investigation corridor, increased traffic and noise as detracting from the picturesque nature and quiet lifestyle of the towns. This also has the potential to deter tourists and visitors for whom the peaceful rural charm of local towns and landscapes is a key attractor.

Impacts on the character of rural residential areas due to localised vegetation removal, cuts and embankment) and road and creek bridges were generally assessed as moderate (refer EIS Appendix H: Landscape and visual impact assessment technical report) including for residents:

- In Grantham, who will have direct views to the proposed alignment and embankments
- In elevated parts of Cunninghams Crest, Range Crescent and Kessling Drive, where residents will have close views towards extensive clearing for earth works and to the alignment, including tunnel portals and ventilation buildings
- In Grandchester, where the Project is located largely at ground level, with the exception of the Western Creek rail bridge
- Helidon Spa, Helidon, Placid Hills, Gatton, Regency Downs, Laidley Heights and Grandchester, where the Project follows the West Moreton System rail corridor and the alignment is buffered by remnant vegetation.

Measures included in EIS Chapter 23: Draft Outline Environmental Management Plan 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.

EIS Chapter 18: Cultural heritage documents the results of an assessment of impacts on Indigenous and non-Indigenous cultural heritage which contribute strongly to local character. With respect to Indigenous cultural heritage, ARTC has undertaken consultation and negotiation with the Yuggera Ugarapul People in accordance with Part 7 of the ACH Act for the Project. A CHMP (CLH017009) was developed to identify, assess and manage Indigenous cultural heritage values across the Project, and was approved by the Chief Executive of DATSIP on 5 June 2018.

The assessment of non-Indigenous heritage values and impacts identified 42 areas of interest within the cultural heritage study area (which included the permanent operational and temporary construction disturbance footprint plus 50 m on either side). These sites included railway culverts and rail bridges, rail stations, memorials, hotels, outbuildings on farms, community halls and houses. The Project would result in the removal of the Helidon Railway Culvert and the Lockyer Creek Rail Bridge. The Project has committed to staying within the West Moreton System rail corridor through Forest Hill, Grandchester and Gatton to avoid impacting on heritage places near the corridor which include war memorials, hotels and railway stations.

The assessment of cultural heritage impacts concluded that, with appropriate measures, Project impacts could be reduced to moderate for two places, and neutral/slight for the remainder. In general, mitigation includes an archival recording and interpretation. Impacts to the Helidon Railway Culvert and Lockyer Creek Rail Bridge remain as moderate due to their heritage significance (State significance) as they would be removed. Notwithstanding, the removal of houses and farm buildings may be experienced as a loss of local character.

## Operation

There is a consensus of community concern that railway infrastructure including viaducts, bridges and double stacked train carriages will have a negative impact on the scenic beauty of valleys and ridges in the Lockyer Valley.

The Project passes directly through the towns of Gatton and Forest Hill through the south of Grandchester, and to the north of the towns of Helidon, Laidley and Calvert, with potential for impacts on the scenic character of towns or views to surrounding landscapes. Standard rural fencing (post and wire) will be required to the extent of the Project (except between the corridor and an adjacent railway or road corridor), however a 1.8 m chain wire fence may be required near roads or within towns to prevent trespass, with gates at corridor entry/exit locations and private level crossings. This will 'harden' the appearance of the rail corridor.

EIS Appendix H: Landscape and visual impact assessment technical report provides the results of assessment of the Project's impacts on landscape character during its operation, which are summarised below.

In Gatton, Forest Hill and Calvert the alignment follows the West Moreton System rail corridor and is considered consistent with the current landscape character. However, residents in Forest Hill and Calvert will experience close views towards the alignment.

Visual impacts on landscape character assessed as of moderate significance were identified as follows:

- In Helidon, residents to the north of the town will have direct views to Project infrastructure
- Grantham would not experience a change to its landscape character, however residents in Grantham's north will have elevated views towards Project infrastructure
- In the east of Laidley, residents of the McInnes Field residential estate and nearby rural residents will experience close views towards the Project infrastructure, including large cuts



- North of Laidley, residents of the Valley Vista and Cunningham Park residential estates will experience very close views of the Project alignment and embankments
- In Grandchester, views to the Project will generally be screened by vegetation along Western Creek, however the views of rural residents to the south of the town will be affected by the Project.

Other areas of social use or environmental appreciation where character may be affected by visual impacts or noise include:

- Creeks which would be crossed by rail bridges
- Lockyer National Park north of the alignment near Helidon, which is popular for remote bushwalking and 4WD and motorbike touring
- Laidley Cultural Centre
- Cunningham Crest Outlook, a viewpoint to observe the Laidley plains
- McKeons Lagoon, a local water hole within the Calvert township.

The UQ Gatton Campus is approximately 1.7 km north of the alignment and will experience elevated views towards the alignment, however, the Project is situated within the West Moreton System rail corridor in this area.

Collectively, changes to views, vistas, the noise environment and local connectivity will affect rural character in potentially impacted communities, with Gatton, Forest Hill, Grandchester and rural residential areas most affected. As local people are closely connected to their rural and natural environments, many are likely to feel anger or sadness about environmental changes the Project would bring, and this may have implications for their feelings of connection to their place and community, or for mental health.

In addition to the Project infrastructure's impacts on landscape during operations, the frequency and size of freight rail trains traveling through towns will increase, with potential for increased occurrence of rail noise, whilst the operation of level crossings will result in interruptions to cross-corridor traffic. Noise impacts may also affect sense of place, which is strongly related to the peaceful rural and natural environments.

Proposed measures to reduce the visual impact of rail infrastructure (EIS Appendix I: Landscape and visual impact assessment technical report) (LVIA) include:

- Infrastructure will 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 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.

Cultural heritage structures which were assessed as likely to experience impacts of moderate (other than neutral or slight) significance include the Helidon Railway Culvert and the Lockyer Creek Rail Bridge, as outlined in EIS Appendix S: Cultural heritage survey report. Impacts on sites such as the Weeping Mother Memorial, the Boer War Memorial, the Railway Station and the Station Master's Residence in Gatton, the Forest Hill Railway Station, School of Arts and War Memorial, and the Grandchester Railway Complex and Community Hall were assessed as slight or neutral. On this basis, changes to cultural heritage which would have a significant impact on local character or tourism visitation are considered unlikely. ARTC will work with the LVRC, ICC and local community groups in all potentially impacted communities to:

- Develop mitigation such as tree screens and noise walls which will reduce visibility to the disturbance footprint
- Engage with community members in each community to identify works and social programs which will address impacts on rural character and identity
- Provide financial support for local planning and facility upgrade initiatives which will improve social amenity (e.g. access to and quality of parks and community facilities).

### **7.1.8 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 social cohesion to generate contributions to social resources (from school tuckshop staff to aged care support) to sustain social structures. The SIA community survey indicated that local resident's ratings of their communities' capacity to cope were lower than their ratings for all other factors (refer Section 5.3.6) so protection of community cohesion is particularly important.

An estimated 26 households (or approximately 70 people, based on the Lockyer Valley LGA's average household size) would need to relocate. Some of them are likely to relocate within their communities. Compared to the combined population of the two LGAs in the SIA study area, this would not be a significant loss to community cohesion. However, at the local level, it may diminish neighbourhood networks and membership of community and sporting associations.

Other potential effects on community cohesion during construction include:

- Potential to reduce movements between adjoining agricultural properties through severance of informal access tracks or private roads
- Traffic delays on routes between communities as the result of road works and the construction of road-rail crossings, which could affect willingness to travel to social activities in Gatton, Grandchester, Laidley/Laidley North and Forest Hill
- Potential for community conflict about the Project to affect community harmony.

During operations, the intensification of the rail corridor could be experienced as a physical barrier within the communities of Gatton, Grandchester and Forest Hill, and train pass-bys would intermittently interrupt travel across these towns. However, each of these communities has had a rail line through town for many decades, and community members are likely to adapt to the changes with no long-term impacts on community cohesion.

Local communities are closely knit, as is typical of rural communities where people know each other well and mutual help is cornerstone of daily life, so social networks are particularly important. Severance between properties 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 and towns where properties would be acquired or vacated as a result of the Project. ARTC's investments in local communities will include a focus on programs and services which strengthen local social networks and provide opportunities for people to meet and participate in community activities.

#### **7.1.9 Disadvantage**

The Project has potential to displace residents with limited socio-economic resource from the disturbance footprint through property acquisitions or the requirement to remove DTMR-owned dwellings. There is also potential for construction and operation to affect the amenity and connectivity of properties within and near the Project alignment, in areas where residents have low levels of social resources to help them cope with change. There were 16 SA1s traversed by the Project that had SEIFA IRSAD scores within Quintile 1 in 2016, indicating significant potential for disadvantage. With the exception of SA1s in Grandchester and Calvert, all SA1s through which the Project passes had SEIFA IRSAD scores in Quintile 1.

There is also a likelihood that farming paddocks and infrastructure will be affected by the Project, with the destruction of dams or fences, severance of paddocks or disruption to cross-corridor movements. ARTC will enter into mitigation or compensation agreements for the loss of land and farming infrastructure which supports farming livelihoods.

Where the Project follows the Gowrie to Grandchester future State transport corridor, it will pass along the northern boundary of the Grantham Reconstruction Area, which was created through the 'Strengthening Grantham Project' following the devastating floods in 2011, and through the town of Grandchester which was also badly affected by floods. Some people in this area are still traumatised by the past floods and will need particular care with respect to communication about Project impacts and mitigation.

There are neighbourhoods within Helidon Spa where social disadvantage is evident (through analysis of SEIFA scores), which have already been affected by the impact of road works for the Toowoomba Bypass. These residents may feel particularly vulnerable to impacts such as noise and traffic disruptions and will require attention in the Project's communication and engagement process during the detailed design phase.

Some people are already experiencing stress or anxiety as a result of uncertainty about land acquisitions and the Project's potential impacts on amenity or property values. Particular efforts will be required to identify and assist these residents to avoid causing them future disadvantage.

This will require a close focus on communicating with residents and community and working with them to mitigate the impacts at the local level. In particular, social connections (as supported through community facilities and networks) are critical to wellbeing and will need to be respected and, where possible, preserved. The SIA study area has a high representation of people with limited educational attainment, so it will also be necessary to ensure that Project communications are clear and accessible.

Whilst percentages of people who spoke a language other than English at home were lower than the State average in most local communities, Gatton has a highly multicultural community where 17.7 per cent of residents spoke a language other than English at home in 2016, with the most common other languages including Mandarin, Arabic, Korean and Punjabi. Areas in Gatton north of the disturbance footprint have a particularly diverse community and will require specific attention as part of communication and engagement planning for the construction and operations phases. Backpackers and students from many countries also spend time in the Lockyer Valley.

Information about the Project's EIS and construction schedule will be made accessible to people with low or no proficiency in English via promotion and use of a telephone interpretation service. The Project will also undertake engagement with the Lockyer Multicultural Association regarding any need to translate or otherwise directly communicate ARTC's safety information to residents with low English proficiency, and/or or short-term residents with a lack of familiarity with rail networks.

At the broader level, a positive impact would result with construction employment sustaining the income of Project personnel and their families, as further discussed in Section 7.2.

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 a partnership with the Darling Downs and West Moreton PHN, to the Richmond Fellowship (based in Ipswich), 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 LVRC, ICC 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 DCHDE, Darling Downs and West Moreton PHN, ICC and LVRC, and/or through an expression of interest process. Further details on the Project's social investments and partnerships are provided in Section 8.5.

#### **7.1.10 Connectivity**

##### **Construction – road works**

During construction, the Project will result in the severance of driveways and informal private access roads to properties, temporarily disrupting access to individual properties and potentially restricting access where land is required temporarily for construction activities. ARTC is consulting with affected landowners to determine appropriate agreements and measures to mitigate potential property access impacts. Legal access to properties will be maintained.

Where the Project interfaces with roads, traffic detours will be required, with potential for traffic delays and an increase in travel time, with potential to affect accessibility to community services and facilities through changes to access road arrangements (refer Section 7.4.2). The following roads which are key access routes for residents, businesses, farmers, and transport companies may experience short delays to traffic during construction:

- Seventeen Mile Road
- Warrego Highway
- Jamiesons Road
- Burgess Road/Smithfield Road
- Eastern Drive
- Chadwick Road
- Dodt Road
- Railway Street
- Forest Hill-Fernvale Road
- Old Laidley-Forest Hill Road
- Laidley-Plainland Road

- Paroz Road
- Rosewood-Laidley Road
- Grandchester-Mount Mort Road
- Calvert Station Road/Hiddenvale Road.

Road re-alignments would also be required on several roads, with potential for localised traffic disruption during construction, including:

- Air Force Road to Seventeen Mile Road near Helidon
- Seventeen Mile Road near Helidon
- Connors Road between Helidon and Grantham
- Smithfield Road/Off Beavan Road and Hickey Street in Gatton
- Spencer Street/Eastern Drive in Gatton
- Gordon Road and Glenore Grove Road in Forest Hill
- Old Laidley-Forest Hill Road and Laidley Plainlands Road to Boundary Road
- Calvert Station/Neumann Road, west of Calvert.

### **Construction - traffic**

Increased traffic can be expected as equipment, materials and people are transported to and along the temporary construction disturbance footprint, and in relation to the transport of spoil from tunnel construction. The majority of spoil is expected to be reused as embankment fill for other Inland Rail projects and is proposed to be transported along the rail corridor and not along the wider transport state and local government road networks. Excess spoil unsuitable for re-use (approximately just over a million cubic meters) has the potential to be used as fill material for the development of the Gatton West Industrial Zone. If this occurs it would be transported along state and local government road networks including the Warrego Highway and Toowoomba Bypass. Further discussion of spoil management is provided in Appendix T: Spoil management strategy and Appendix U: Traffic Impact Assessment Technical Report.

The transport of spoil may increase traffic volumes on key routes with potential to affect Levels of Service. The vehicular traffic that is expected to be generated through the transport of spoil material along the public road network has been included in assessment of the impact that this traffic is expected to have on the public road network provided in Appendix U: Traffic Impact Assessment.

Further assessment of traffic and transport impacts as the result of spoil transport will be undertaken during the detailed design phase and will consider the potential for impacts on other road users. EIS Appendix U: Traffic impact assessment technical report provides a detailed assessment of Project impacts on the road network impacts, finding that the Project may potentially cause a minor change in levels of service for some road sections during construction. Road sections considered to have a moderate change in levels of service include:

- State Roads - Forest Hill Fernvale Road, Karrabin Rosewood Road and Rosewood Laidley Road
- Turner Street in the Lockyer Valley LGA
- Dent Street and Water Street North in the Toowoomba LGA.

As the changes in Levels of Service would be temporary, the assessment as outlined in Appendix U: Traffic impact assessment technical report indicates that this would be acceptable, and apart from the identified road sections, the levels of service of the overall road network will be no worse as a result of the Project.

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.

Assessment of traffic and transport impacts (EIS Appendix U: Traffic impact assessment technical report) indicates that:

- Project-related traffic consists of traffic generated by both construction and operational activities, however, impacts on the traffic network would primarily be during construction
- In relation to level crossings, acceptable Levels of Service would be maintained
- Increases in traffic associated with the Project are likely to increase vehicle exposure at rail crossings, which will be mitigated by ensuring safe design standards are implemented to minimise and mitigate the impact significance and likelihood of crashes which may occur at level crossings.

Further details regarding effects on roads and traffic access are provided in EIS Appendix U: Traffic impact assessment technical report.

There was also stakeholder concern about the potential for construction works to result in changes to flooding impacts which would affect local roads. EIS Chapter 23: Draft Outline Environmental Management Plan provides that construction works must not cause adverse flooding impacts at flood sensitive receptors including roads in the vicinity of the Project up to and including the 1% AEP flood event. With respect to operations, EIS Appendix M: Hydrology and flooding technical report provides an assessment of the potential for increased flooding risks to affect road access. The assessment predicted only minor changes to the duration of inundation for Dodt Road and Hall Road. with negligible impacts on the amenity of the roadways.

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 7.4.3.

A Road Use Management Plan (RUMP) will be developed for the Project during the detailed design phase to identify, where required, appropriate traffic and transport management strategies and minimise the impact on the efficiency of road networks as well as the operational safety of the Project related vehicles accessing the construction sites. The RUMP will provide road use management strategies including:

- Use of variable message signs
- Travel demand management
- Use of shuttle buses to transport workers
- Avoiding peak hour traffic, especially near schools / bus routes
- Fatigue management strategies.

A CEMP will also be prepared during the detailed design phase. The CEMP will include a TMP developed in consultation with DTMR, Councils and an accredited road safety auditor. The TMP will take into consideration:

- Final construction routes
- Approaches to seasonality and stock routes
- Areas of significant pedestrian and cyclist activity
- Standard hours of work and deliveries
- Specific hours of deliveries impacted by local land uses (e.g. school zones)
- Bus service operators (e.g. public transport, school buses, long distance services)



- Emergency services
- Staff transport and parking.

Further detail on the Project's RUMP and TMP is provided in EIS Appendix U: Traffic impact assessment technical report.

### **Construction – cycle network**

Proposed construction traffic routes may coincide with cycle routes within the Queensland Principal Cycle Network Plans (PCNP) as follows:

- DTMR: Cunningham Highway, Gatton Helidon Road, Gatton Laidley Road, Laidley Plainland Road, New England Highway, Pine Mountain Road, Rosewood Laidley Road and Warrego Highway
- Toowoomba Regional Council: Herries Street, Dent Street, Station Street, North Street and Mort Street
- LVRC: Hickey Street, Railway Street, Tenthill Creek Road, Unnamed Road and William Street
- ICC: Redbank Plains Road.

The safety of cyclists using these routes will be considered in the TMP.

### **Construction and operation - road closures**

The Project proposes the closure of:

- Warrigal St (providing access to the Helidon Explosives Magazine Reserve) and Wrights Road/Andersons Road (providing access to the Toowoomba Pistol Club) north of Helidon, but with alternate access provided via a proposed road bridge structure where the rail line will travel under Air Force Road which is within 500 m of both road closures
- Seventeen Mile Road, with access to the Helidon Sandstone quarries maintained through alternate routes, but potential for a small increase in travel time
- Philips Road west of Placid Hills, with a proposed rail bridge structure where the rail line will travel over Philips Road located approximately 400 metres to the west to maintain connectivity
- Gaul Street in Gatton, which would remove a direct link to William Street in the town centre for homes north of the rail corridor, with alternate connections maintained via a proposed rail bridge structure where the rail line will travel over Old College Road and Crescent Street approximately 400 m west of Gaul Street, and via a proposed road bridge structure where the rail line will travel under Eastern Drive, approximately 500 m east of Gaul Street. The Eastern Drive structure will also include cycle and pedestrian paths, and pedestrian, cycle and mobility scooter access will still be available via a reconstructed Gatton Railway Pedestrian Road bridge.
- Hunt Street in Forest Hill, with a proposed active level crossing at this point to maintain pedestrian, bicycle and mobility scooter access, and vehicle access across the line available at Glenore Grove Road approximately 100 m to the east
- Old Laidley Forest Hill Road, but with access maintained through alternate routes and connectivity maintained by a proposed rail bridge structure where the rail line will travel over Laidley-Plainland Road approximately 250 m east of the road closure
- Railway Street and Kessling Drive east of Laidley, with access maintained through alternate routes including Range Crescent approximately 500-600 m to the east

- Doonans Road, east of Grandchester, with access maintained through alternate routes including a proposed rail bridge structure where the rail line will travel over Rosewood Laidley Road approximately 500 m to the east
- Neumann Road west of Calvert, with connectivity maintained via a level crossing Calvert Station Road approximately 250 m to the east.

On this basis, whilst road closures would result in minor inconvenience and small increases in travel times, no major disruptions to connectivity are anticipated.

### Operation

ARTC's approach to maintaining connectivity will include reconfiguration of roads to accommodate new grade separated crossings, re-alignment of roads and redefining road corridors to meet local council and DTMR requirements. Careful consideration to the type of crossing at each of the road/rail interfaces has been given to avoid where possible, or minimise, impacts to the surrounding road network. The type of crossing proposed at each interface has been determined based on existing road/rail interface points, access to properties, potential traffic levels, land use, nearby crossings, adjoining properties and the vertical geometry of the Project.

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. Grade separations at road/rail interface points are based on ARTC's Grade Separation policy, which includes implementing grade separations due to the topography and other engineering requirements and where the rail traverse's freeways and highways of four or more lanes, or limited access roads. In total, the Project will adopt 10 grade separated intersections including five rail bridges over roads, one rail bridge over rail and our road over rail bridges.

Where the Project crosses lower order public roads, level crossings have been proposed. The Project will require seven active level crossings (which include additional infrastructure such as boom gates and/or flashing lights to alert motorists and pedestrians of coming trains) on:

- Connors Road, between Helidon and Grantham
- Jamiesons Road, west of Gatton
- Dodt Road, Forest Hill
- Glenore Grove Road, Forest Hill
- Neumann Road, between Grandchester and Calvert
- Grandchester Mount Mort Road, Grandchester
- Calvert Station Road, Calvert.

With respect to the level crossing required on Dodt Road, residents were worried that children, young people or people with disability would access the rail corridor unsafely and be involved in a rail accident. The crossing will include audio-signals and flashing lights. ARTC's safety awareness program for the Project will be designed to ensure children, young people and people with disability have access to clear and appropriate information about rail, pedestrian and cycle safety.

Level crossings on public roads will result in temporary disruptions to traffic movements. The Project estimates a maximum of 33 train movements per day (at 2026). The wait time at a level crossing has been estimated at approximately two minutes (including lowering and raising of boom gates) causing short delays to traffic. The number of train movements is expected to increase to up to 46 train movements per day by 2040 resulting in an increase in the frequency of traffic delays, and trains of 3.6 km in length may operate in the Inland Rail corridor from 2040, which could result in longer traffic delays at level crossings.

Surrounding land uses, including farming operations, are likely to be impacted from the associated vehicle delay times at level crossings. This will potentially disrupt the commercial operations of agricultural activities due to the potential regular delay in the transportation of water, feed and stock to and from these land uses (refer Section 7.5.1 for further detail).

### **Pedestrian connectivity**

There are six existing pedestrian interfaces with the Project including at:

- Gatton Station
- Gaul Street, west
- Gaul Street, east
- Dodt Road
- Hunt Street
- Grandchester Mount Mort Road.

It is proposed that these pedestrian level crossings are all retained via grade separations, except for the western Gaul Street level crossing which will be closed as part of the proposed closure of the existing Gaul Street crossing. Since the adjacent pedestrian crossing is proposed to remain open as a grade separation, it is not expected that significant impacts to pedestrian connectivity will occur.

The existing Gatton Station Pedestrian Footbridge crosses the QR rail lines and provides a link between the southern and northern sides of Gatton. The Project's alignment is located on the northern side of the QR lines and would sever access to the Gatton Station for residents located on that side. Following discussions between ARTC and LVRC the Gatton Station Pedestrian Footbridge will be replaced. The design for the replacement bridge will comply with QR Pedestrian Overbridge design specifications and Disability Discrimination Act requirements (amongst other QR, Australian Standard and DTMR requirements).

The Project's design includes space for a future shared path to be provided between Placid Hills and Laidley, with a connection to the UQ Gatton Campus, as part of DTMR's PCNP. Based on DTMR's advice, the design also includes upgrading Eastern Drive to accommodate four lanes and a shared path based on DTMR's PCNP to provide access for cyclists and pedestrians.

### **Passenger rail**

Although the alignment is initially intended for freight transport, future stages of the Project may include construction works for additional infrastructure within the rail corridor to provide for passenger transport.

The corridor identified for the Project will be of sufficient width to allow for the assessment of the land provision for possible future upgrades to accommodate future possible passenger transport.

## **7.2 Workforce**

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 Employment opportunities

#### Construction

Construction is planned to commence in 2021 and be completed in 2026. The size and composition of the construction workforce will vary depending on the construction activities being undertaken and the staging strategy adopted. The core construction workforce will consist of professional staff, supervisors, trades workers and plant operators, with earthworks crews, bridge structure teams, capping and track-works crews working at different periods through the construction phase.

The construction workforce will require an average of approximately 250 personnel during the first year, building to a peak of 410 FTE personnel early in Year 2 of construction. Over the full construction period it is expected that the Project will require an average of approximately 190 personnel per year.

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.

Shifts of ten hours (allowing two hours per day traveling time) will be available to the construction workforce to ensure local personnel have the opportunity to seek employment.

#### 7.2.2 Labour availability

As shown in Section 5.4.1, the SIA study area's construction industry workers numbered approximately 8,356 people in 2016, of whom 1,307 people (15.6 per cent of the total) lived in the Lockyer Valley LGA and 7,049 people (84.3 per cent of the total) lived in the Ipswich LGA. Construction industry employment grew by approximately one percentage point in each LGA in the ten years to 2016, when it represented 8.4 per cent of the Ipswich LGA's workforce and 8.3 per cent in the Lockyer Valley LGA.

As at November 2019, on the basis of the DJSB's Small Area Labour market data (refer Section 5.4.4), the Toowoomba SA4 had 3,000 fewer people employed in the construction industry than in 2018, which was largely due to the completion of construction of the Toowoomba Bypass. The number of people employed in construction in the Toowoomba SA4 was 1,600 lower (21.0 per cent) than in 2014, indicating the likelihood of latent capacity for construction labour within the SA4.

A similar trend was seen in the Darling Downs-Maranoa SA4 (immediately west of the Toowoomba SA4), with 1,300 less people employed in construction over the one-year period, and 1,700 fewer people over the five-year period (a decrease of 30.1 per cent).

The Ipswich SA4 saw significant increases in construction employment with an additional 1,700 people employed over the one-year period and 5,400 people over the five-year period, an increase of 46.5 per cent. The Logan- Beaudesert SA4 also saw significant increases in construction employment, with an additional 2,900 people employed in construction over the one-year period and an additional 5,800 people (equivalent to an increase of 37.6 per cent) over the five-year period. These trends indicate a substantial construction labour pool exists in the Ipswich and Logan-Beaudesert SA4 regions.

At the June quarter 2019, the unemployment rate in the Ipswich LGA was 6.9 per cent, and in the Lockyer Valley 5.7 per cent (DJSB, 2019) following decreases over the preceding three years of 0.9 percentage points in the Ipswich LGA and 1.4 percentage points in the Lockyer Valley LGA. This represented 7,614 unemployed people in the Ipswich LGA and 1,105 unemployed people in the Lockyer Valley LGA, for a total of 8,719 people, some of whom would be interested in Project employment.

As noted in Section 5.4.4, the number of Ipswich LGA residents receiving Jobseeker or Youth Allowance had increased to 18,485 people in June 2020, whilst the number of Lockyer Valley residents receiving these benefits had increased to 2,940 people (Id.Profile, 2020). Whilst some Youth Allowance recipients are studying or training and not yet seeking work, the number of recipients increased dramatically between March and June 2020, with an increase of 62.1 per cent in the Ipswich LGA and an increase of 54.5 per cent in the Lockyer Valley LGA, largely due to economic contraction resulting from COVID-19 restrictions.

Collectively, skilled construction industry workers and unemployed workers represent a significant regional pool of existing skilled labour and other workers who can be trained for construction work on the Project. The Project will also have access to construction personnel within a daily driving distance in adjacent LGAs. On this basis, difficulties accessing adequate labour for construction are not expected.

ARTC commitments to local and Indigenous employment include:

- Working with local communities (including Indigenous stakeholders) 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 the Contractor as part of contractual requirements.

As the construction workforce is expected to be drawn primarily from communities within the SIA study area and nearby LGAs, employment benefits would extend to construction industry workers across the region. The availability of employment over four years would be a strong opportunity for those personnel and their families.

As a relatively modest requirement, the movement of up to 410 personnel to Project employment in the context of regional supply is not expected to place undue pressure on the local or regional labour market. This is further discussed in EIS Appendix R: Economic impact assessment. However, there may be shortages in specific trades (such as specialist welders) which could be exacerbated by Project construction. Cumulative demands for construction labour are likely, as discussed in Section 7.6.

As many social impacts and opportunities associated with the Project will emanate from construction activities, ARTC will work with the Contractor to deliver targets relating to social performance and in particular, local and Indigenous employment. These targets will be set in consultation with the Contractor during the detailed design phase.

### **Operational employment**

A workforce of approximately 15-20 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.

A portion of the operational workforce and contractors could be drawn from the SIA study area offering the potential for SIA study area residents to obtain long-term employment.

ARTC is cooperating with DITRDC and Inland Rail Skills Academy partners 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.

### **7.2.3 Training and development opportunities**

The Project's construction phase represents an important source of potential training and career pathway development for Indigenous people and young people in the SIA study area.

ARTC is establishing the Inland Rail Skills Academy which is a collection of projects and partnerships with the aim to:

- Facilitate local employment and procurement opportunities regionally by 'priming the market' in each region in which Inland Rail would be constructed
- Make it easy for Inland Rail contractors to employ and procure trained and competent people locally; and
- Build Inland Rail's social licence to operate for Inland Rail projects.

The Inland Rail Skills Academy will provide the coordinating framework for all training and skills development partnerships and 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: 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 business chambers and business groups



- Inland Rail staff training and inductions: opportunities for staff to increase skills in a range of areas including safety and sustainability.

The partnerships and projects which make up the Inland Rail Skills Academy are in progress, as described in Section 8.3.

The Contractor will also implement training and apprenticeship programs in accordance with its workforce management plan, which will be developed during the detailed design phase and approved by ARTC prior to construction.

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
- Indigenous community networks, to encourage applications and increase the number of Indigenous people applying for jobs
- Partners such as DESBT, DITRDC, CSQ and universities, to link training and development programs with other projects and local industries to provide the greatest regional benefit

ARTC consultation with Councils identified the Queensland Government-funded RSIS initiatives being undertaken by Councils as a key resource. RSIS projects 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.

Key issues being addressed by the LVRC RSIS project include STEM activities with schools (noting that the Lockyer District State High School has particular strengths in STEM education), and skills development for the agriculture, construction and hospitality industries. The Ipswich RSIS has identified priorities for skills development in advanced manufacturing, defence industries, and transport and logistics. There is an opportunity to align Inland Rail's skills development and business participation objectives with RSIS objectives and activities, with currently identified partnerships including:

- A SQW partnership with LVRC to provide construction skills training as part of upgrading a local community facility
- A SQW partnership with ICC to implement a 'working with rail' skills program for Indigenous people.

ARTC will continue to consult with Council's' RSIS project officers to identify and implement these opportunities.

The need for collaboration to build Lockyer Valley businesses' capacity to benefit from the Project was also a key issue raised in consultation. This will be done in cooperation with LVRC and ICC and local Chambers of Commerce as outlined in Section 8.6. ARTC has commenced engagement with Lockyer Valley and Ipswich Chambers of Commerce in this regard.

The Inland Rail Skills Academy will help to ensure that young people and Indigenous people in the SIA study area 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 SIA study area. With respect to operations, The Inland Rail Skills Academy will include a workforce development project providing training for participants to meet the rail industry worker national competency management system for track workers. This will include implementation of the Inland Rail Indigenous Rail Worker program.

#### **7.2.4 Impacts on employment in other industries**

In the Lockyer Valley LGA in 2017, 847 of the 3,053 registered businesses (28 per cent of the total) were in the agricultural, forestry and fishing industry. More than 65 per cent of the LGA's businesses were 'non-employing' i.e. owner run without staff, and a further 32.6 per cent had between one and 19 employees (refer Section 5.4.3).

The Project is likely to sever farms and areas of sown pasture. The majority of farms and grazing operations within the EIS investigation corridor are managed by their owners with the use of casual labour when required. Employment in the agricultural, forestry and fishing industry accounted for 2,874 SIA study area residents in 2016 (ABS, 2016 and an estimated 3,026 people in 2017-2018 (Id. Profile. 2018), so any loss of employment due to impacts on farms is unlikely to destabilise the industry as a whole but would be stressful and potentially disadvantageous for the employees affected, at least until they can obtain other employment. Landowners will be compensated for land acquisitions, in accordance with the AL Act (refer section 7.1.2), however maintaining the continuous productivity of farms (and the livelihoods they support) will require cooperative relationships and ongoing engagement with ARTC.

Tourism and hospitality accounted for approximately 367 jobs in the Lockyer Valley LGA in 2016-2017 (Id. Profile. 2018) which was a decrease from 2012-13 when there were an estimated 433 jobs in this industry. Tourism businesses would not be directly impacted by the Project, however, impacts on the amenity of tourism attractions or town centres may impact their visitation and trading levels, with potential for impacts on businesses' capacity to offer employment. This is not quantifiable, however impacts on tourism businesses are further discussed in Section 7.5.4.

Economic impact assessment undertaken for the Project (EIS Appendix R: Economic impact assessment) indicates that in a 'slack' labour market (characterised by the availability of unemployed and under-employed workers with relevant skills) Project construction is expected to generate a total of 1,050 jobs (including direct and indirect jobs) in the Toowoomba SA4, whereas in a tight labour market, approximately 232 jobs would be generated in the Toowoomba SA4. Additional jobs would also be generated in the Greater Brisbane region. The Construction, Professional, Scientific and Technical Services and Wholesale Trade industries are anticipated to see the largest increases in jobs.

Assuming that labour market conditions in the catchment area do not change materially from existing conditions, and based on the industry employment and occupation of the local workforce, the economic impact assessment found that the local labour market is likely to have the capacity to supply a significant portion of the workforce requirements of the Project without major disruption.

Cumulative labour market impacts are also possible, with the concurrent construction of projects having the potential to increase the demand for labour in the local and regional economy, particularly for workers with trade and construction skills.

ARTC is working with CSQ to identify and address labour shortages, and facilitate 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.

As part of Inland Rail, the Project would facilitate complementary private investments in facilities such as freight terminals and logistics hubs and may contribute to long-term employment opportunities in the SIA study area.

### 7.2.5 Workforce management

Construction personnel will be working in close proximity to homes and businesses. Some residents are concerned about family safety and privacy, given personnel may not be known to them, and the fact that works will be in close proximity to homes in some areas.

ARTC will ensure that the Contractor has appropriate workforce management policies and procedures, to avoid the potential for any impacts on community safety or reduce the potential for impacts on the privacy of homes. This will include a workforce Code of Conduct which will apply to all personnel when they are at work, travelling to and from work, and in public places, and will include:

- Expected standards of behaviour
- Respect for private property, including driveways and fence lines, and for the privacy of residents
- Guidelines for respectful engagement between the workforce and local residents and businesses
- Respect for local community values, e.g. family-friendly public places and safe streets
- Safe, legal and courteous driving
- Prohibition of all forms of sexual harassment and assault
- Prohibition of racist behaviour, racist language and discrimination.

Non-compliance with the workforce Code of Conduct would risk termination of employment.

Construction personnel's traffic behaviour is a source of concern for residents. In addition to an increase in traffic and vehicle noise as personnel arrive at and leave work sites, non-local personnel may be inconsiderate of existing road users. Construction personnel and transport drivers will be provided with guidance regarding roads to be used, the standard of driving behaviour required of all personnel and drivers, fatigue management, and the sanctions for driving behaviour that is not in accordance with the Project's standards.

As noted in Section 7.1.3, the majority of laydown areas which may attract and accommodate workforce traffic are located on grazing land outside towns. A TMP will be prepared prior to construction. This plan will identify the impacts that construction traffic (including workforce commuting) is likely to have on the local transport infrastructure and road users, and detail ameliorative measures required to avoid, reduce or mitigate all identified impacts of the project. The Plan will be developed in consultation with DTMR, relevant local governments and emergency services.

ARTC's complaints management process will be made available to local residents and businesses, which will ensure a fast and effective resolution to any issues experienced.

## 7.3 Housing and accommodation

This section discusses the Project's potential impacts on the settlement pattern, housing and short-term accommodation, including seasonal worker accommodation.

### 7.3.1 Settlement pattern

ShapingSEQ and the relevant LGA planning schemes identify land within the EIS investigation corridor that has been designated for future residential and rural living purposes (DIP, 2009; Gatton Shire Council, 2007; Laidley Shire Council; LVRC, 2011).

Table 7-3 describes the likely impact of the Project on land within towns and rural residential communities in proximity to the EIS investigation corridor. Much of the Project will be contained with West Moreton System rail corridor, avoiding direct impacts on the settlement pattern.

Gatton and Laidley are the main growth centres in the SIA study area, with future residential areas in each likely to be impacted by the Project. Tracts of the Urban Footprint defined by Shaping Queensland for these towns would be dissected by the alignment. The urban footprint at Helidon may be impacted if development of remaining rural residential blocks adjacent to the alignment is limited by their attractiveness.

The rural living settlement pattern at Helidon Spa may also change, with people potentially less likely to live in homes which are closest to the Project.

Other settlements are also proximate to the alignment, but as they are already largely developed, the settlement pattern there is unlikely to be altered (e.g. Forest Hill, Placid Hills and Grandchester).

The Project will avoid reconfiguring property to create new residential development, in compliance with ICC’s request.

**Table 7-3 Potential Project impact on settlement patterns**

Settlement	Relationship to Project	Impact
Helidon	The area south of the alignment is within the Urban Footprint in ShapingSEQ and land within the EIS investigation corridor has been designated for Urban Residential land supply in 2-10 years	Potential to constrain development of future lots adjacent to the alignment
Helidon Spa	The area west of Helidon Spa (on Postmans Ridge Road) south of the alignment between Ch 26.0 km and Ch 26.8 km is designated as Rural Living Area in ShapingSEQ	No significant change, as land use in the EIS Investigation corridor primarily consists of grazing land with sandstone mines to the north and rural residential properties to the south
Grantham	The alignment traverses the northern edge of the Grantham Redevelopment Area, with land designated Rural Residential located between Ch 34.2 km and Ch 36.2 km and land designated Residential Living within the EIS investigation corridor between Ch 35.8 km and Ch 36.2 km	No significant change, as land use in the EIS Investigation corridor primarily consists of grazing land, with some small parcels of residential and cropping uses
Placid Hills	Placid Hills is a designated Rural Living Area. The alignment traverses the northern perimeter of the area between Ch 37.0 km and Ch 41.0 km. The area adjacent to the alignment and within the EIS investigation corridor is largely already developed.	No significant change as area is largely developed
Gatton	The Project (within the West Moreton System rail corridor) passes through future growth areas defined by the Urban Footprint for Gatton and the established township. It dissects significant areas identified for future growth as follows: <ul style="list-style-type: none"> <li>■ North of the alignment between Ch 39.4 km and Ch 45.2 km and south of the alignment between Ch 39.4 km and Ch 43.2 km (north/north-west of Gatton)</li> <li>■ North of the alignment between Ch 44.6 km and Ch 39.4 km (north-east of Gatton)</li> <li>■ South/south-west of the alignment between Ch 45.0 km and Ch 47.0 km (east of Gatton).</li> </ul>	No significant change as area is largely developed
Lawes, UQ	The campus site is 1.7 km from the alignment at its nearest boundary (near Ch 48.6 km)	No significant change

Settlement	Relationship to Project	Impact
Forest Hill	Forest Hill has not been identified as a growth area. The settlement pattern is largely developed.	No significant change
Laidley/ Laidley North	The EIS investigation corridor passes through the northern and eastern parts of future growth areas designated by the Urban Footprint between Ch 57.4 km and Ch 60.8 km. The alignment passes approximately 400 m south of the Cunningham Crest Estate which is fully developed. The Project passes through the Valley Vista Estate. Housing has been developed south of the alignment, with potential for additional lots to be developed. Future development is planned for north of the alignment, but the timing and likelihood of this is uncertain.	Acquisition of lots likely, with potential for operational noise to constrain development of lots closest to alignment
Grandchester	Grandchester has not been identified as a growth area and is largely already developed	No significant change, as land use within the EIS investigation corridor primarily consist of grazing land and irrigated seasonal horticulture
Calvert	Future Investigation Areas with potential for development as an urban area are within the existing lots surveyed within the township boundaries. The alignment traverses the northern perimeter of the township.	No significant change, as the area is largely developed or consists of grazing land

### 7.3.2 Population change

The extent of property acquisition for the Project will be confirmed through detailed design. For the purpose of estimating changes to the population of communities and the SIA study area, and resulting housing requirements, the following assumptions have been made:

- Approximately 26 households or an estimated 70 people (based on average household size in the Lockyer Valley LGA) would need to relocate from rural properties, rural residential properties and towns as the result of property acquisitions to enable Project construction
- The Project will require a construction workforce of approximately 410 people at peak and an average of 190 employees over the four-year construction period
- The majority of the workforce will be drawn from either the SIA study area or nearby communities
- No accommodation camps will be required.

Property acquisitions would result in very small decreases in the populations of neighbourhoods. There is a possibility that displaced residents may relocate elsewhere within the region, and in the context of a combined SIA study area population of more than 200,000 people, population change at the regional level would be negligible.

With a portion of the construction workforce to be sourced from nearby communities, and the remainder expected to be drawn from with a safe daily driving distance (as determined by the Contractor), the daytime population of the EIS investigation corridor would increase by an average of up to 190 people during the construction period, with a consequent increase in the number of males given that men comprise the majority of construction workforces. Again, in the context of a regional population of some 200,000 people, this would not cause any noticeable change to the population composition. No other impacts on the population are expected.

With a requirement for up to approximately 15-20 personnel during operations, and as some personnel would be drawn from surrounding communities, no significant population change is expected as a result of the Project's operational workforce.

### 7.3.3 Property values

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

Consultation participants cited anecdotal evidence that property prices were decreasing in local towns as a result of uncertainty about Project impacts. Analysis of SQM Research data (SQM Research 2020) indicated that there had been an increase of 10.6 per cent in asking prices for houses in Laidley over the 12-months to January 2020 and an increase of 12.8 per cent over the three years to January 2020. In Gatton, SQM Research data indicated a decrease in average asking prices for houses of 2.8 per cent over one year and a decrease of 3.6 per cent over three years. These data do not capture agricultural land, rather concentrating on residential property, and do not differentiate between properties near the rail corridor and other properties; however they do not indicate major decreases in asking prices for residential properties in Gatton and Laidley during the past three years. Data for other potentially impacted communities were not available due to their small real estate markets.

Research on the relationship between property values and infrastructure was conducted to determine the extent to which property values are likely to be affected by the Project. According to Elliott (2008), property prices are determined by a combination of the property's actual utility (i.e. use and amenity) and buyer's perceptions about the environmental impacts of infrastructure. Responses to perceptions of risk vary amongst buyers and research into the effects of freight lines on property values in Australia did not identify a history of substantial risk to property values or buyers.

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.

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 (5-7 per cent) for smaller houses located within 750 feet (approximately 230 m) from a freight railroad track.



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 landowners) or impacts on amenity (e.g. increased traffic or dust during construction, or noise during operation). Impacts would be differential depending on potential buyers' perceptions about 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 supply and demand, agricultural commodity prices, or the effects of other projects (such as highway re-alignments).

Landowners' 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 and the variability of Project impacts. 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 EIS investigation corridor.

### **7.3.4 Housing access**

Within towns and built up areas, the EIS investigation corridor is primarily located within the West Moreton System rail corridor, minimising direct effects on residential properties. However, land acquisitions and the requirement for removal of DTMR-owned dwellings within the EIS investigation corridor may require the relocation of up to 26 households in the EIS investigation corridor. New homes for up to 26 households would be required as a result. New demand for housing would be unlikely to impact housing affordability, increasing demand on the SIA study area's housing supply by less than 0.1 per cent.

This includes approximately seven households who are renting DTMR-owned properties within the EIS investigation corridor and would need to relocate. There is potential for these DTMR tenants to include low income households and Indigenous families who typically have less housing security due to lower median incomes and a higher reliance on rental dwellings than for non-Indigenous households.

ARTC's strategies to reduce the impacts of property acquisition on landowners, tenants and their families 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. The Project will liaise with the Constructing Authority and/or DCHDE to ensure that people relocating from DTMR dwellings have access to services to assist them to locate suitable housing.

It does not appear that land acquisition would impact on housing owned by DCHDE.

On the assumption that Project personnel would be drawn from within the SIA study area and/or return to homes outside the SIA study area at night, an increase in demand for rental housing is not expected during the construction phase.

There is a possibility that a small number of workers would require accommodation, particularly if cumulative demands on the labour force from multiple projects require the employment of personnel from regions outside a daily driving distance. Construction workers are highly mobile and few would be likely to move their families to the Project region during construction, especially as the peak construction period would last for a short time, but there is potential for a small number of personnel to require either family housing or shared housing.

If ten per cent of the average workforce required accommodation in the Project region, and assuming each worker required one house or unit each, this would result in the need for up to 19 houses or units. This demand would likely be spread across the Ipswich, Toowoomba and Lockyer Valley LGAs, and with approximately 641 rental dwellings available between the potentially impacted communities and the central postcodes of Ipswich and Toowoomba in January 2020, this level of demand would be indiscernible in the regional context. Whilst larger centres are likely to be preferred over smaller communities due to the level of amenity available, if demand of this order was concentrated in potentially impacted communities, it would be equivalent to approximately 14.5 per cent of the rental dwellings available as at January 2020, with potential to increase competition for local dwellings and the possibility of upward pressure on rental costs.

In the event that 20 per cent of the average construction workforce required housing locally, and assuming each worker required one dwelling each, up to 38 rental dwellings would be required which would equate to less than 6 per cent of the rental dwellings available in January 2020 between the Ipswich central, Toowoomba central and potentially impacted communities postcodes. This level of demand is unlikely to result in competition for local housing or an increase in rental costs.

Housing demand, if experienced, would build during the first two years of the construction phase and is unlikely to significantly affect housing availability or cost for local residents. ARTC will require the Contractor to develop and implement an AMP as further discussed below and in Section 8.5, to include minimising the use of rental housing in potentially impacted communities.

There is potential for a small reduction in the number of rateable properties in the SIA study area as the result of property acquisitions, however this is likely to be offset by property owners and tenants relocating within the SIA study area, potentially stimulating a small increase in demand for new housing.

### **7.3.5 Short-term accommodation**

With the majority of construction personnel returning home at the end of their shifts, a significant demand for short-term accommodation such as hotels and motels appears unlikely. There may be small and occasional demands for accommodation for Project personnel, which would be experienced as a welcome increase in trade for accommodation providers.

Analysis of the availability of hotel and motel rooms in potentially impacted communities indicates that there is some spare capacity, with the adjoining LGAs of Toowoomba and Ipswich also likely to have spare capacity (refer Section 5.5.3). However, travellers for other industries and tourists occupy short-term accommodation in the potentially impacted communities, and events such as the Lockyer Valley Country Music Week (held in late February-early March in 2020), Toowoomba Carnival of Flowers each September, equestrian and speedway events at the Gatton Showgrounds, conferences and functions at the Laidley Cultural Centre, and motor sports and music cents at the Ipswich Motorsports Precinct result in short-term peaks in accommodation demand (generally over weekends) in the Project region. The Project will monitor personnel demands for accommodation to ensure that tourists are not being displaced.

In the event that 10 per cent of the Project's peak workforce required short-term accommodation for a period during the construction phase, this would see a requirement for 41 rooms, with demand likely to be experienced in the Lockyer Valley, Ipswich and Toowoomba LGAs.

A scan of accommodation availability in August 2020 identified 47 vacant hotel and motel rooms (from a total of approximately 148 rooms) in communities within the Lockyer Valley, which indicates that the local short-term accommodation market would generally have some capacity to service additional demand. Local accommodation providers have expressed interest in providing accommodation during the draft EIS consultation phase. It will however be necessary for the Contractor to monitor the availability of short-term accommodation within the Lockyer Valley in particular to identify any workforce demands which may displace tourists in consultation with the accommodation providers and LVRC, and to modify its guidance to non-resident workers regarding suitable accommodation options if this is required. This is further discussed in Section 8.4.

Accommodation in Toowoomba and Ipswich would also be within a daily driving distance and is more extensive with more than 1,500 rooms provided across the two LGAs, of which more than 600 rooms may generally be available based on the most recent ABS data. Demand for 41 rooms would equate to less than 7 per cent of the rooms estimated to be available in the Ipswich and Toowoomba centres, which is not expected to 'crowd out' tourists or business travellers and is likely to be a welcome opportunity for accommodation businesses. Demand for accommodation for 20 per cent of the peak workforce would see the need for 82 rooms or up to 14 per cent of rooms that are estimated as available within the three LGAs. Demands during peak periods associated with events such as the Toowoomba Carnival of Flowers and music festivals such as CMC Rocks would need to be monitored to minimise the possibility that tourists or event visitors would be 'crowded out'.

The availability of short-term accommodation in the SIA study area changes in response to community events and the demands relating to major projects. An updated analysis of the availability of short-term accommodation in the SIA study area will be required as part of the Contractor's Accommodation Management Plan (AMP).

The AMP will include specification of the following outcomes:

- Use of accommodation facilities that may experience Project impacts, e.g. hotels in Forest Hill and Gatton
- Avoiding the use of accommodation in local caravan parks to avoid displacing other users
- Consideration of the schedule for major community and tourism events in the Ipswich and Lockyer Valley LGAs, to minimise the coincidence of any Project demands with peak tourist and event visitor demands.

Further details on the AMP are provided in Section 8.4.

There is potential for the cumulative workforce demands of several large projects (including other Inland Rail projects) to increase the number of non-local personnel required for the Project, which in turn could increase demands on short-term accommodation, as discussed in Section 7.6.2.

There is potential for impacts on the amenity of accommodation provided at the Lockyer Hotel and Forest Hill Hotel in Forest Hill, and the Royal Hotel and Commercial Hotel in Gatton, which are located within 100 m from the alignment. Property-specific mitigation may be required to ensure that amenity impacts do not result in a decline in the use of the accommodation, which could lead to its removal from the local accommodation pool, affecting the viability of this and other associated businesses. This is further discussed in Section 7.5.2.

For the operational phase, the majority of workers would also return home at night, with a small number potentially accommodated locally (e.g. personnel on fatigue breaks). As such, impacts on the supply of short-term accommodation are not expected.

### 7.3.6 Seasonal worker accommodation

Seasonal worker accommodation is a key strength of the Gatton, Laidley and Grantham areas, and supports the agricultural industry's access to labour. Key facilities located near the Project are described below.

The Grantham Farmworkers Lodge is located approximately 900 m south of the Project alignment at Ch 37.0 km. The Project is not expected to impact on this facility e.g. through noise or dust.

The Homestyle Lodge is located in Laidley North approximately 400 m south of the Project alignment. There is potential for one of the Homestyle Lodge's buildings to be affected by operational noise. ARTC and the SIA team sought to consult with the owners of the Homestyle Lodge, but engagement was not achieved. During the detailed design phase, the Homestyle Lodge owners will be advised that there is potential for noise exceedance during construction and invited to work with the Project regarding any site-specific mitigation required to meet noise criteria at this property.

As noted in Section 5.5.3, the Lockyer Valley's agriculture industry undertakes almost year-round planting and harvesting, which mitigates large seasonal variations in demands for accommodation of seasonal workers (Stafford Strategy, 2018).

The Gatton Caravan Park which accommodates seasonal workers is discussed below.

### 7.3.7 Gatton Caravan Park

The Project would be adjacent to the Gatton Caravan Park's southern boundary at Ch 44.4 km and would involve land acquisition within the caravan park, as well as extensive works to the caravan park's western boundary to accommodate the Eastern Drive road-over-rail bridge and road widening, and to the southern boundary to accommodate the rail corridor.

ARTC's has had two meetings (to date) with the caravan park's owner (during December 2018 and December 2019). Gatton Caravan Park has been mentioned or discussed at nine meetings with LVRC between March 2018 and September 2020, however as the park is privately owned LVRC has deferred to the park's owner. SIA consultation with the caravan park's owner was sought during 2020 and commenced in October 2020. ARTC provided an update on the Project to businesses in the Eastern Drive area during October 2020 and spoke with the manager regarding the caravan park's clientele.

The caravan park includes approximately 127 cabin and caravan sites and six recently constructed backpackers' dormitories of 20 beds each, providing low cost accommodation for seasonal workers. The caravan park manager advised that tourists seeking accommodation are referred to other options and there are no local residents or students living in the caravan park. It is therefore evident that, due to the lack of permanent residents in the Gatton Caravan Park, it is not likely that impacts to the facility will impact Gatton's housing market in any significant way. Furthermore, the lack of students from the University of Queensland using this caravan park for long term accommodation also indicates that the university does not need to be considered as a secondary stakeholder in the discussions around this facility and all consultation will continue to be had with the park owner himself.

Assuming an average of two people are accommodated by each caravan and cabin site, the sites have current capacity to accommodate approximately 254 people, plus 120 people accommodated in dormitories, for an estimated total capacity of approximately 374 people. Subject to a further development approval by LVRC, an additional 33 caravan and cabin sites (assumed as accommodating up to 66 people) would be constructed, for a total future estimated capacity of 440 people.

The peak period for picking (and therefore accommodation) commences from March/April each year, with the low period commencing in December or January. The caravan park's manager has advised that the park is regularly near or at capacity with people turned away during peak picking seasons. During 2020, occupancy peaked in September and as of October, there were approximately 140 residents.

The caravan park's owner noted concerned about the potential for land acquisition impacting on the caravan park and its development plans. Information on the reference design and indicative extent of acquisition was provided and indicative timing for the detailed design phase, acquisition by DTMR and construction staging were also discussed. Acquisition of land within the caravan park is expected to be required, with potential for a reduction in its current capacity of approximately 15 per cent, and a reduction in future planned total capacity of up to 28 per cent. This would result in a reduction in the availability of affordable accommodation for seasonal farm workers in Gatton. Amenity impacts are also likely during construction, and without noise mitigation, during operation as discussed below. Full acquisition is unlikely but would be determined by the Constructing Authority in cooperation with the caravan park's owner, after gazettal of the rail corridor.

## Amenity

During construction, roadworks, embankments and structures for the Eastern Drive crossing would be located on the caravan park's boundary to the west. Works would also occur on the caravan park's southern boundary to upgrade the West Moreton System rail corridor, and a laydown area would be located on the rail corridor to the east. The amenity of the caravan park would be reduced due to construction noise, the visibility of construction works on three sides, interruptions to vehicle and pedestrian access, and potentially dust.

During operations, the Project would result in an increase in the number of train movements, and an increase in the size and length of trains using the rail line, with a consequent increase in the frequency of rail noise. Noise exceedances are possible but could potentially be controlled by transmission noise control.

The potential for noise to affect the park's amenity during construction and operation was a key concern for the caravan park's owner. Noise impacts could be addressed through provision of a noise barrier close to the rail line. Another option is for a noise barrier within the boundaries of the caravan park; however, this was not supported by the owner. Drainage was also of concern, which has been addressed through the reference design which allows water to flow from Hickey Street under the new bridge through culverts to a catchment in the golf course.

The Project will continue to engage with the caravan park's owner to determine mitigation options to address Project impacts on amenity including:

- Noise (e.g. through temporary hoardings, and locating noisy plant and car parking areas as far as possible from the accommodation units)
- Dust (e.g. additional dust suppression measures if dust generation is affecting the caravan park)
- Impacts on scenic amenity (e.g. using hoardings to screen construction works from the park, or landscaping)
- Pedestrian and cycle access (e.g. through creation of a temporary pathway during construction)
- Vehicle access (e.g. through relocating the park's entry if this is required).

With respect to operational noise, concept noise barrier(s) have been considered, with any final options to be designed in consultation with the caravan park owner and LVRC.

There is potential for visitors to be deterred as the result of these amenity impacts, or for visitors' enjoyment of the caravan park to be affected.

### **Partial acquisition**

ARTC estimates that acquisition of approximately 1.5 hectares within the caravan park would be required. Based on the Project reference design maps provided, the caravan park's owner has indicated that this would result in the loss of approximately 22 caravan and cabin sites, with the possibility that an internal road may need to be re-aligned, resulting in the loss of a further six sites, or up to 28 sites in total.

The loss of up to 28 sites (assuming capacity for two people per site) would be equivalent to a reduction in the caravan park's overall current capacity of approximately 56 people or 15 per cent of total capacity.

On the basis of the Project reference design, the Eastern Drive works (including construction of a road over rail bridge, road widening and embankments) are also likely to impact on the location for the proposed 33 additional caravan and cabin sites. The caravan park owner has not pursued development of these sites during 2020 due to uncertainty about the extent of land acquisition required under the final detailed design. Assuming the proposed 33 sites are not constructed as a result of the Project proceeding, the reduction in planned future total capacity would be approximately 28 per cent. There is also potential for Project works to affect a planned water park within the caravan park. Impacts on the caravan park as a business will be addressed through the land acquisition and compensation agreement with the caravan park's owner.

A reduction in the capacity of the caravan park may result in a shortfall in accommodation to service the local agricultural industry.

The catchment for the caravan park's farm workers is to be determined, however there is a possibility that the planned expansion of the Grantham Farmworkers Lodge (approximately 9 minutes' drive to the west of Gatton) could meet this capacity shortfall.

Agreement has been reached to continue SIA consultation with the caravan park's owner and manager during the remainder of 2020, to seek further baseline data such as the resident profile and occupancy rates, the owners' and managers' views on potential impacts, and inputs on measures which could reduce impacts on the park and its customers. Consultation with other stakeholders including LVRC is being undertaken during October - November 2020 as the basis for further assessment and development of mitigation measures. The results of this consultation and assessment will be provided as part of the final EIS and will consider amenity and access impacts as well as the scenarios for partial and full acquisition.

### **Full acquisition**

The Construction Authority will determine the extent of acquisition based on the detailed design and in consultation with the caravan park's owner, following the approval of the EIS and gazettal of the rail corridor.

The need for full acquisition of the caravan park is not anticipated, however in this event the following impacts could result:

- Loss of an important source of accommodation for seasonal farm workers, requiring the identification of alternative accommodation in a suitable location. This could result in inconvenience or increased travel costs and time for farm owners, or as a worst case, disruption or delay to farm operations such as harvesting if sufficient accommodation was not available
- Loss of trade for businesses near the caravan park, such as the Lockyer Laundromat, Mango's Bike Repairs and a BP service station, and potentially also loss of trade for businesses such as the Gatton supermarket, hotels and cafes.



The full range of potential impacts and mitigations for either scenario (partial or full acquisition) will be assessed during the remainder of the EIS phase. In the event that the park was to be fully acquired, the Project will deliver the following measures:

- Cooperation with the caravan park's owner to identify alternative sites for the caravan park in the Gatton area
- Provision of information to nearby businesses which may be dependent on park visitors' trade (e.g. the laundromat, bike repair shop and the BP service station) regarding the timing and extent of any reduction in capacity or loss of the caravan park
- Provision of information to enable alternative accommodation providers (e.g. Grantham Farmworkers Lodge) to progress expansion plans, at the discretion of these providers
- Provision of information to farms and agribusinesses regarding any loss of accommodation within the caravan park, and accommodation alternatives for seasonal workers.

### **Mitigation of loss of accommodation capacity**

ARTC will review the Project footprint in cooperation with the Construction Contractor (when appointed) to minimise the land area of the caravan park to be impacted.

ARTC's objective is to pursue mitigation options that achieve a no net loss, or at worst, minimal loss of affordable accommodation. As ARTC is not the Constructing Authority and the precise extent of impacts will not be known until the detailed design is complete, ARTC is somewhat constrained in selecting and confirming mitigation solutions.

Uncertainties will exist for up to a year regarding:

- any changes to the Project design as it would affect the caravan park
- the timing and nature (e.g. area and location) of land acquisition affecting the caravan park
- the caravan park owner's position on land acquisition and actions which may mitigate impacts (e.g. reconfiguration or relocation)
- the range of stakeholders who may need to be involved at a further stage, dependent on the impacts and options identified.

Measures to offset any loss of accommodation capacity within the caravan park which will be investigated as part of ongoing assessment include:

- Land swap/relocation of the caravan park to adjacent or nearby suitable sites
- Reconfiguration of the park to replace lost accommodation capacity (e.g. through construction of new dormitory accommodation)
- Development of accommodation in an alternate location to accommodate farm workers (as a possible joint venture arrangement) e.g. Grantham Farm Lodge which has considerable approved capacity for expansion
- In consultation with Council, identification of other suitable accommodation proposals (e.g. a proposed but not built small lot accommodation facility and an approved redevelopment of the former Imperial Hotel site for student accommodation), and partnership with proponents to bring forward planned expansions or developments.

## 7.4 Health and wellbeing

A community's health and wellbeing are shaped by the 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.

Issues raised by consultation participants included:

- Anxiety and fears about property amenity or value, property acquisition, impacts on farms, and the potential for an increase in the number of dwelling, farms and roads impacted by floods or the duration of flood impacts
- Impacts of construction traffic or road re-alignments or closures on school bus routes
- Concern regarding changes to air quality (e.g. dust and fine particulate matter from diesel emissions) which could affect human health
- Impacts on traffic safety during construction
- Impacts on firefighting access
- Increased demand for community and individual support services
- Risks associated with the transportation of hazardous goods.

This section addresses issues raised by community members and potential impacts identified.

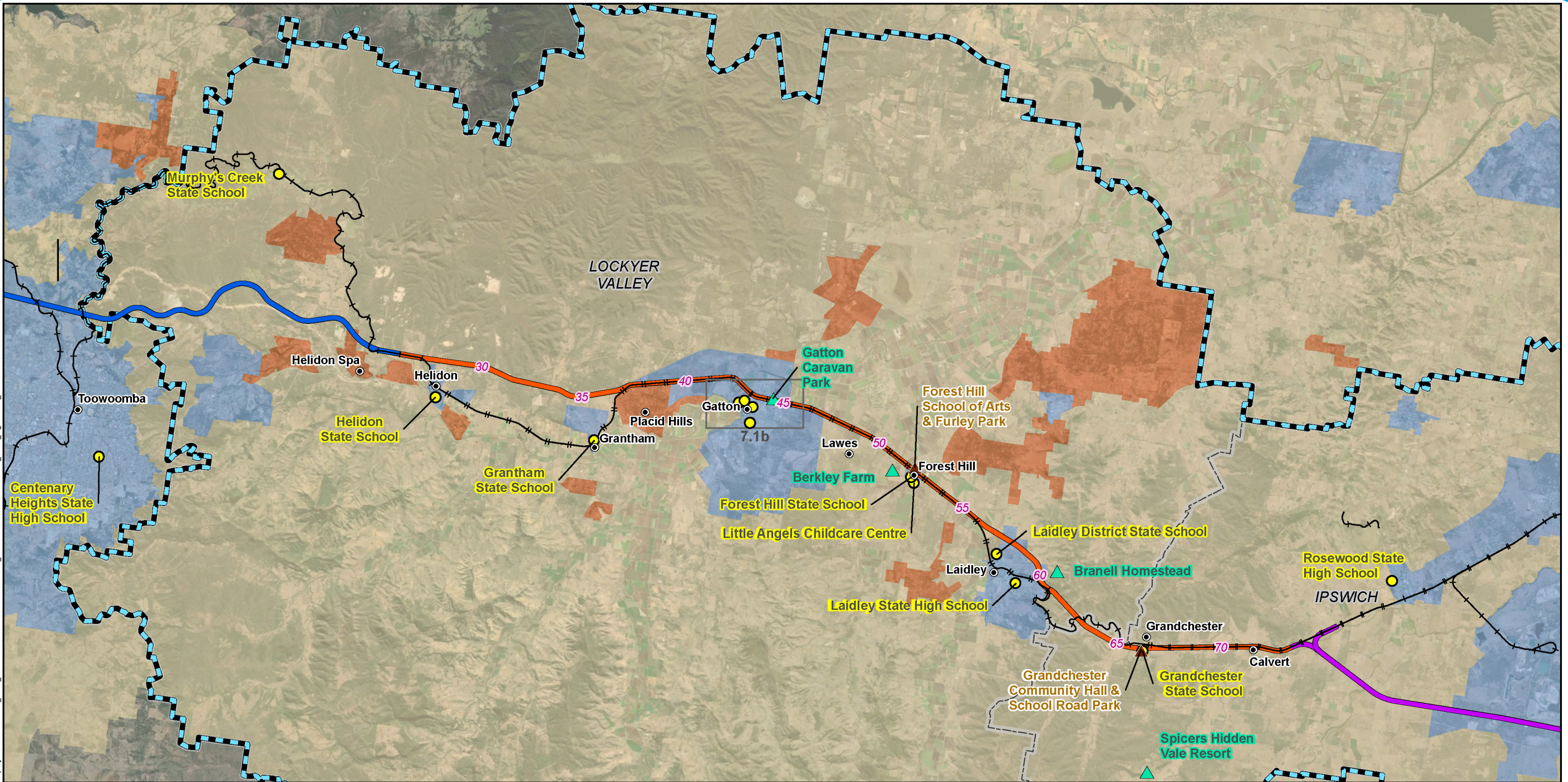
### 7.4.1 Education, childcare and community facilities

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 subsection discusses the potential for impacts on community facilities.

Figure 7-1 shows the location of the Project in relation to key community facilities and regional land uses.



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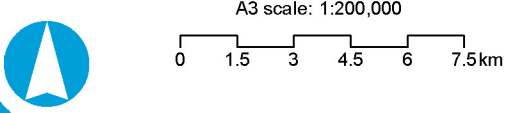
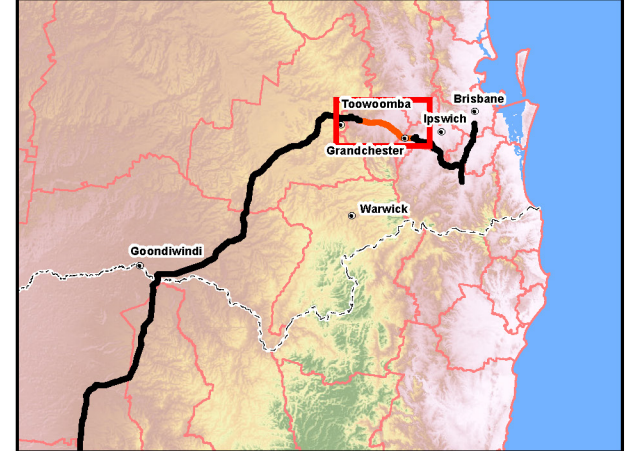


**Legend**

- 5 Chainage (km)
- Localities
- Education
- ▲ Parks and recreation
- ▲ Visitor points
- Existing rail
- G2H project alignment
- H2C project alignment
- C2K project alignment
- ▭ SIA study area
- ▭ Local Government Areas

**Regional land use categories**

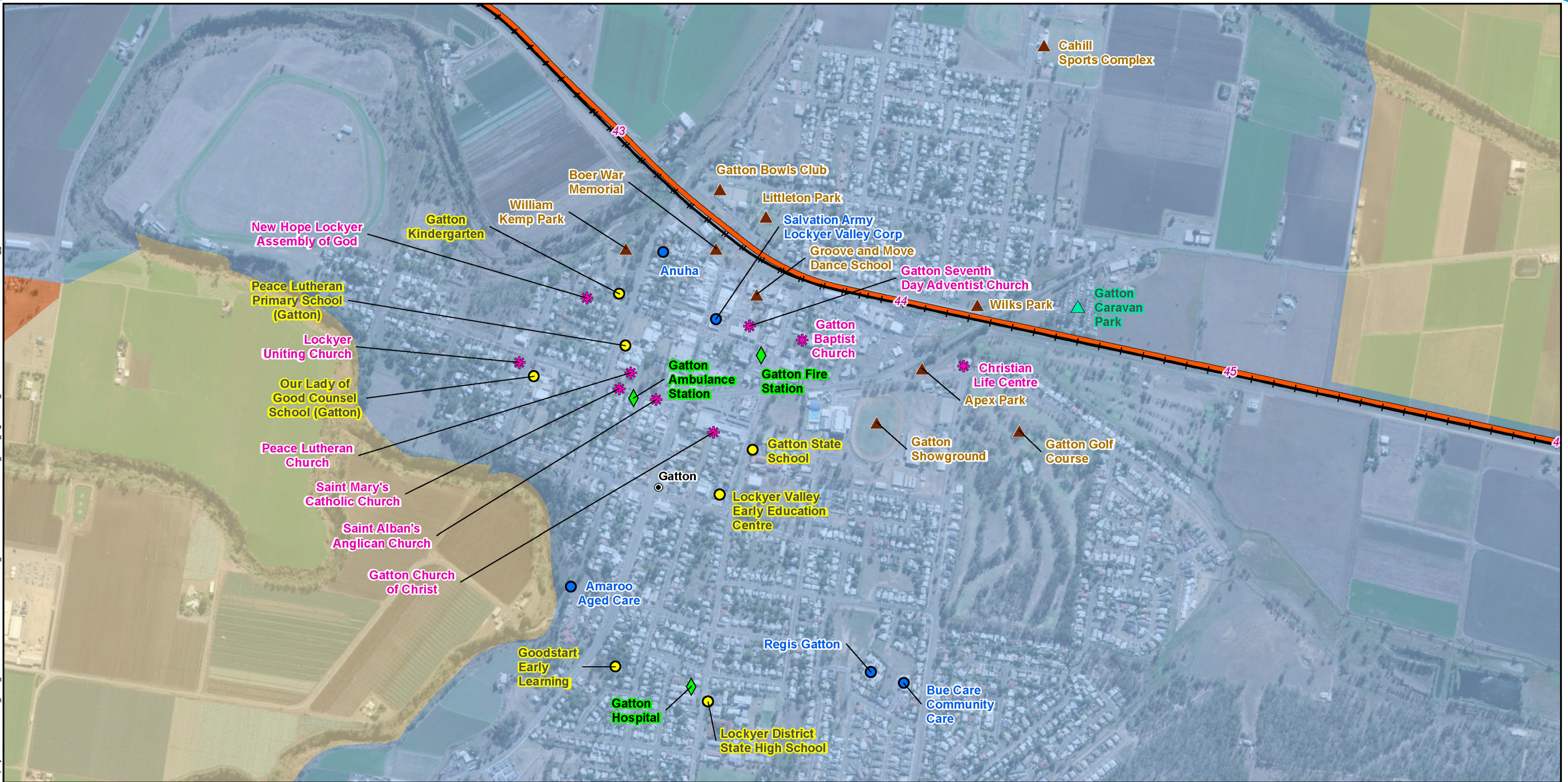
- Regional Landscape and Rural Production Area
- Rural Living Area
- Urban Footprint



**Helidon to Calvert**  
**Figure 7.1a:**  
**Settlements, land use and social infrastructure**



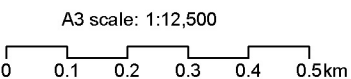
Map by: LCT Z:\GIS\GIS\_3300\_H2C\Tasks\3300-EAP-2020\2130942\_SIA\3300-EAP-2020\2130942\_F.V. Figure 7.1b\_SettlementsLandUseAndSocialInfrastructure\_gatton.mxd Date: 27/03/2020 11:53



**Legend**

- 5 Chainage (km)
- Localities
- Aged and community care
- Education
- ▲ Parks and recreation
- ✳ Places of worship
- ◆ Health and emergency
- ▲ Visitor points
- Existing rail
- H2C project alignment
- ▭ SIA study area

- Regional land use categories**
- Regional Landscape and Rural Production Area
  - Rural Living Area
  - Urban Footprint





## Construction

EIS Appendix O: Noise and vibration (construction, fixed infrastructure and operational road noise) technical report predicts that construction noise would affect up to 26 community buildings, eight medical facilities (including hospitals and general practitioners/allied health clinics) and up to 19 educational facilities (early years education centres and schools). Key facilities which may be affected are shown in Table 7-4. Potential for construction noise to exceed noise criteria was not identified in relation to community halls, community centres or war memorials, however for a conservative assessment of impacts on community facilities, the potential for construction noise or operational noise exposure within noise criteria for community halls and centres near the Project is also noted in Table 7-4. Research shows that noise disturbance can cause significant delays to student learning and contribute to emotional difficulties and hyperactivity (Bronzaft A, McCarthy D. 1975; van Kamp, et al. 2008). There is also potential to affect pedestrian, cycle or vehicle access to schools and other facilities as detailed in Table 7-4.

There is potential for construction noise, if not mitigated, to affect the learning environment of local schools. ARTC has consulted with the Department of Education with respect to potential noise exceedances at schools and will address the Department's Learning Environment Guidelines with respect to mitigation of noise impacts on schools. This may include e.g. fencing upgrades or mechanical ventilation to enable windows to be kept closed if construction noise is affecting students. ARTC will also consult with private school principals on the basis of the detailed design to explain any potential for construction noise and identify any specific management measures which need to be considered in the CEMP.

Grandchester State School in particular may require substantial works to mitigate Project impacts given its location within approximately 200 m of the disturbance footprint and the potential for impacts including construction noise, dust and disruption to connectivity between the school and town during construction of the level crossing on Grandchester Mount Mort Road. The school has a current enrolment of approximately 40 students, and any decline in enrolments as the result of concerns about Project impacts may reduce the resources available to the school or challenge its viability. ARTC is engaging with the Department of Education to discuss the results of EIS findings, and develop a management plan which will reduce impacts on the school's connectivity to homes and facilities in the School Road Reserve, construction noise and dust, and visual impacts on the school's surrounding landscape.

There is potential for construction traffic including heavy vehicles to use the Grandchester Mount Mort Road, which is used by families and children to access the school, which was identified as a concern by the school. Consultation with Gatton State School and Gatton Kindergarten identified concern regarding school drop-off routes via the Gaul Street level crossing and William Street in Gatton, noting a potential impact to trafficability and traffic increases.

The TMP developed in the detailed design stage will include provisions such as limiting use of Grandchester Mount Mort Road and William Street during the hours of 7.00 a.m. to 9.00 a.m. and 2.00 pm to 4.00 p.m. The Project will also ensure that safe pedestrian access to the school is maintained. This will include provision of a safe pedestrian access between the town of Grandchester and the school in recognition that a favoured short-cut via the Grandchester Rail Station and recreation grounds would be heavily impacted by the Project footprint.

ICC noted in consultation that Education Queensland is planning for the development of 30-50 new schools in the LGA in the coming decades, to respond to the projected population growth. The potential locations of future schools and their catchments will be discussed with the DET in ARTC's ongoing consultation regarding avoidance and mitigation of Project impacts on schools.

The Christian Life Centre on the corner of Golf Links Drive and Chadwick Road in Gatton may be directly impacted to enable Project construction, depending on the detailed design. In addition to local residents, the congregation includes transient farm workers, who currently walk to the church. If the current use of the Church is impacted, this would be experienced as a loss to the community. ARTC is consulting with the Church leaders to explore options to mitigate potential impacts to enable the continued use of the Church.

The Salvation Army Lockyer Valley Corps is located on Old College Rd and the Salvation Army Family Store is on Railway Street in Gatton. Both may be affected by construction noise and traffic. ARTC has commenced consultation with the Salvation Army to ensure they are aware of potential impacts and will work with them to identify any specific mitigation required to ensure the shop (a key fundraiser for community services) and the Corps headquarters can maintain their functions.

The New Hope Assembly of God Church in Gatton is also likely to experience disrupted pedestrian and vehicular access during construction, which will need to be addressed in the detailed design to maintain appropriate access to the church.

There are also three war memorials closely located near the Project alignment, including the Weeping Mother's Memorial in Littleton Park in Gatton, the Boer War Memorial in Crescent Street Gatton, and Anzac Park in Forest Hill. ARTC will require that the Contractor considers the location of the memorials, and in particular that use of the laydown area to the south of Littleton Park has regard to Anzac Day and Remembrance Day services.

Gatton Bowls Club, the Gatton Jubilee Golf Course and local parks are likely to be affected, as discussed in Section 7.4.4. Gatton Showground is in proximity to proposed works to Eastern Drive which is also discussed in Section 7.4.4.

Construction noise would be temporary and would vary according to the nature of works that would occur near the facilities (e.g. earthworks have greater potential for noise impacts). The timing and duration of noise impacts will not be known until the detailed design is developed and the construction methodology is confirmed. Based on the detailed design and indicative construction methodology, ARTC will consult with the owners/managers of all facilities and services identified in Table 7-4 (including Queensland Health, Department of Education, private school owners, church leaders, childcare owners and the owners/managers of other community facilities and services) to explain the potential for noise exceedances and the nature and indicative timing of works which could exceed noise criteria, identify facilities' specific needs (e.g. Department of Education and Queensland Health policies and guidelines, church service and memorial event times when impacts need to be minimised and community events schedules) and identify feasible measures which would reduce the impacts of construction noise on facility owners and users.

As the majority of the construction workforce is expected to be drawn from the local labour pool (within a one-hour drive), the Project is not expected to generate increased demands on existing education, childcare and or other community facilities during construction.

## Operation

The potential for rail noise to affect churches or schools was raised in consultation. Assessment of the Project's potential noise and vibration impacts during operation (EIS Appendix P: Operational railway noise and vibration technical report) found that the predicted noise levels potentially trigger an investigation of noise mitigation at up to 13 non-residential sensitive receptors (in 2040) as follows:

Education facilities (schools and school care):

- Forest Hill State School, Forest Hill
- Free Range Kids (childcare), Laidley



- Laidley District State School, Laidley
- Little Angels (childcare), Forest Hill
- Grandchester School, Grandchester.

Religious facilities (churches):

- Christian Life Centre, Gatton
- New Hope Church, Gatton
- Peace Lutheran Primary School, Gatton
- St Mary's Catholic Church, Gatton
- Peace Lutheran Primary School, Gatton
- Forest Hill Presbyterian Church, Forest Hill
- Laidley Baptist Church, Laidley
- St Peter's Catholic Church, Grandchester.

This will require a review of feasible and reasonable noise mitigation options e.g. structural treatments for each of the potentially affected facilities. Consultation with schools (refer to Section 6.3.9) indicates some school and early learning centre buildings are of considerable age (50 to 100 years) and may require at-property treatments (e.g. acoustic treatments or air conditioning) to mitigate noise. The nearest buildings to the Project include a Prep classroom, outdoor shaded areas and temporary buildings (which could potentially be relocated whilst construction noise is being experienced if Department of Education considers this is an appropriate mitigation).

ARTC will also advise train service operators of the location of the war memorials and request that train service providers are considerate of these locations during Anzac Day and Remembrance Day services.

Short traffic delays are anticipated during operations on roads which would have level crossings installed which would include delays for outreach service providers (such as Home and Community Care, community nurses and Meals on Wheels) when trains are passing by.

### Summary

Impacts which will require site-specific mitigation, primarily pertaining to noise management and maintaining connectivity to facilities, include:

- The impacts of construction noise exceedances on the amenity and use of schools and health facilities (refer Table 7-4) to be addressed as part of the Noise and Vibration Sub-plan to the CEMP, and in consultation with DET and Queensland Health
- Effects of construction noise and traffic/pedestrian access disruptions on community facilities which service vulnerable members of the community, such as Alara, Endeavour Foundation, Salvation Army centres, Carinity Karinya Place and aged care facilities, to be addressed as part of the Construction Noise and Vibration Sub-plan to the CEMP and the TMP, as relevant
- Operational noise impacts at the Christian Life Centre and New Hope Church in Gatton, Laidley Baptist Church in Laidley, and St. Peter's Catholic Church in Grandchester, to be addressed through noise mitigation measures, where triggered
- Potential for operational noise impacts at Forest Hill State School, to be addressed through noise mitigation measures if triggered

- Impacts on Grandchester State School including:
  - Potential for construction and operational noise to impact on the school's learning environment, to be addressed through noise mitigation measures to be agreed with the DET
  - Impacts on pedestrian connectivity on Grandchester Mount Mort Road and across the School Road Reserve during construction of the level crossing, to be addressed as part of the detailed design which will maintain pedestrian, cycle and vehicle access
  - Potential for heavy haulage vehicles to travel on Grandchester Mount Mort Road, potentially affecting pedestrian safety, which will be addressed as part of the TMP
  - Severance of access to the northern part of School Road Park
  - The potential for concerns about noise, dust and traffic safety in relation to the large laydown area located 200 m from the school, which will be addressed through the relevant provisions of the CEMP and TMP
- Minimising construction noise impacts on war memorials' days of commemoration, which will be addressed through the relevant provisions of the CEMP
- Effects of construction noise, dust and disruptions to pedestrian and vehicular access amenity on churches, with potential for operational noise to also cause significant disturbances to amenity, which will be addressed through the relevant provisions of the CEMP and TMP.

**Table 7-4 Potential impacts on community facilities**

Locality	Facility
<b>Construction noise exceedances</b>	
Helidon	Saint Joseph's Church
Gatton	Lockyer Uniting Church, Saint Mary's Catholic Church, New Hope Church, Peace Lutheran Church, Saint Alban's Anglican Church, Gatton Seventh Day Adventist Church, Gatton Baptist Church, Gatton Church of Christ, The Salvation Army Lockyer Valley Gatton Ambulance Station, Gatton Fire Station Peace Lutheran Primary School, Our Lady of Good Council School, Lockyer District State High School, Gatton State School Goodstart Early Learning Gatton, Lockyer Valley Early Education Centre Groove and Move Dance School The University of Queensland - Gatton Campus Gatton Hospital, Regis Gatton, Blue Care Lockyer Community Care, Endeavour Foundation, Anuha (a service for people with disability)
Forest Hill	Central Church Forest Hill, Saint Joseph's Church, Forest State School
Laidley	Laidley District State School, Laidley District High School, Alara, Tabeel Aged Care and Retirement Living, Carinity Karinya Place Laidley Hospital
Grandchester	Grandchester State School Grandchester Rural Fire Brigade Saint Peter's Catholic Church

Locality		Facility		
Other potential impacts during construction and operation				
Locality	Facility	Approximate proximity to alignment	Potential impact – construction	Potential impact – operation
Helidon	Helidon State School (School Street)	1.74 km south of the alignment at Ch 27.8 km	<ul style="list-style-type: none"> <li>Disrupted access during construction from north of alignment at Warrigal, Andersons and Seventeen Mile Roads</li> </ul>	<ul style="list-style-type: none"> <li>No impact</li> </ul>
Gatton	Gatton Kindergarten (North St)	360 m from alignment at Ch 43.2 km	<ul style="list-style-type: none"> <li>Disrupted pedestrian and vehicular access between residents on the north side of the Project and community facilities to the south of the Project</li> <li>Potential disruption to access via Gaul Street</li> </ul>	<ul style="list-style-type: none"> <li>Enhanced access via pedestrian bridge at Gatton Station during operation</li> <li>Potential for increased frequency of freight rail noise to distract children and/or affect outdoor activities</li> </ul>
	Gatton State School (William Street)	440 m south of alignment at Ch 43.8 km	<ul style="list-style-type: none"> <li>Disrupted access to Cahill Park sports fields north of the alignment during construction, and with the passing of trains during operations</li> </ul>	<ul style="list-style-type: none"> <li>Potential for increased frequency of freight rail noise to distract students and/or affect outdoor activities</li> <li>Disrupted access to Cahill Park sports fields north of the alignment, whilst trains are passing</li> </ul>
	Peace Lutheran Primary School (East St)	430 m south of alignment at Ch 43.4 km	<ul style="list-style-type: none"> <li>Impact on pedestrian and cyclist access for students crossing at Smithfield and Old College Roads or Gaul Street.</li> </ul>	<ul style="list-style-type: none"> <li>Potential for increased frequency of rail noise to distract students and/or affect outdoor activities</li> </ul>
	Lockyer Valley State High School (William Street)	1.2 km south of alignment at Ch 43.8 km	<ul style="list-style-type: none"> <li>Impact on pedestrian and cyclist access for students crossing at Gaul St and Eastern Drive</li> </ul>	<ul style="list-style-type: none"> <li>No significant impact</li> </ul>
	Lockyer Valley Early Education Centre (William Street)	700 m south of alignment at Ch 43.6 km	<ul style="list-style-type: none"> <li>Impacts on pedestrian and cyclist access for families crossing at Gaul St and Eastern Drive</li> </ul>	<ul style="list-style-type: none"> <li>No significant impact</li> </ul>

Locality	Facility			
	UQ Gatton Campus	1.7 km north of alignment at Ch 48.6 km	<ul style="list-style-type: none"> <li>Possible impact on planned pedestrian walkway from the campus to Gatton township Potential disruption to access south of the alignment during construction from Gatton at the Eastern Drive crossing</li> </ul>	<ul style="list-style-type: none"> <li>No significant impact</li> </ul>
	Gatton Church of Christ (Cnr Hickey and Allan Streets)	Adjacent to alignment	<ul style="list-style-type: none"> <li>Noise, dust and vibration impacts from alignment and construction works in Hickey St.</li> <li>Disrupted pedestrian and vehicular access</li> </ul>	<ul style="list-style-type: none"> <li>Potential for exposure to rail noise</li> </ul>
	Christian Life Centre Pentecostal Church (Cnr Golf Links Drive and Chadwick Road)	140 m south of alignment at Ch 44.2 km	<ul style="list-style-type: none"> <li>Potential impacts to enable Project construction</li> </ul>	<ul style="list-style-type: none"> <li>Potential for exceedance of noise criteria</li> </ul>
	Gatton Baptist Church (William Street)	180 m south of alignment at Ch 43.8 m	<ul style="list-style-type: none"> <li>Disrupted pedestrian and vehicular access</li> </ul>	<ul style="list-style-type: none"> <li>Potential for exposure to rail noise</li> </ul>
	Gatton Seventh-day Adventist Church (North Street)	210 m south of alignment at Ch 43.6 km	<ul style="list-style-type: none"> <li>Disrupted pedestrian and vehicular access</li> </ul>	<ul style="list-style-type: none"> <li>Potential for exposure to rail noise</li> </ul>
	New Hope Lockyer Assembly of God (North Street)	360 m south of alignment at Ch 43.2 km	<ul style="list-style-type: none"> <li>Disrupted pedestrian and vehicular access</li> </ul>	<ul style="list-style-type: none"> <li>Potential for exceedance of noise criteria</li> </ul>
	St Alban’s Anglican Church (Railway St)	600 m south of alignment at Ch 43.6 km	<ul style="list-style-type: none"> <li>Disrupted pedestrian and vehicular access</li> </ul>	<ul style="list-style-type: none"> <li>No significant impact</li> </ul>
	Weeping Mothers memorial (Hickey Street)	100 m north of alignment at Ch 43.5 km	<ul style="list-style-type: none"> <li>Potential for noise impacts</li> </ul>	<ul style="list-style-type: none"> <li>Potential for train noise to interrupt services</li> </ul>
	Boer War Memorial (Crescent Street)	50 m south of alignment at Ch 43.5 km	<ul style="list-style-type: none"> <li>Potential for noise exposure</li> </ul>	<ul style="list-style-type: none"> <li>Potential for train noise to interrupt services</li> </ul>
	Salvation Army Lockyer Valley Corps (Old College Road) and Family Store (Railway Street)	300 m north of alignment at Ch 44.1 and 100 m south at Ch 43.5 km	<ul style="list-style-type: none"> <li>Potential for disrupted access to facilities</li> </ul>	<ul style="list-style-type: none"> <li>No significant impact</li> </ul>
Forest Hill	Forest Hill State School (Church Street)	330 m south west of alignment at Ch 52.2 km	<ul style="list-style-type: none"> <li>Disrupted access during construction and operation at the Hunt Street crossing</li> </ul>	<ul style="list-style-type: none"> <li>Potential for exceedance of noise criteria</li> <li>Disrupted pedestrian and vehicular access during operations for passing of trains</li> </ul>

Locality	Facility			
	Forest Hill Community Hall	Adjacent to alignment at Ch 52.1 km	<ul style="list-style-type: none"> <li>Potential for noise exposure</li> </ul>	<ul style="list-style-type: none"> <li>Potential for train noise to interrupt services</li> </ul>
	Little Angels Childcare Centre	500 m south of alignment, on Victoria Road Ch 52.5 km	<ul style="list-style-type: none"> <li>Disrupted access during construction of the Hunt Street crossing. Potential for Project traffic to cause congestion on Victoria Street</li> </ul>	<ul style="list-style-type: none"> <li>No impact</li> </ul>
	Anzac War Memorial	Adjacent to alignment at Ch 52.5 km	<ul style="list-style-type: none"> <li>Disrupted access during construction</li> </ul>	<ul style="list-style-type: none"> <li>Potential for train noise to interrupt services</li> </ul>
Laidley and Laidley North	Laidley District State School (Patrick Street)	740 m south of Ch 57.4 km	<ul style="list-style-type: none"> <li>Disrupted access stages at Laidley Plainlands Rd and Luck Street crossings.</li> <li>Safety of pedestrian and cycle access for students living in residential area north of alignment at Ch 57.4 km</li> </ul>	<ul style="list-style-type: none"> <li>No impact</li> </ul>
	Laidley State High School (Alfred St)	1.12 km west of alignment at Ch 60.2 km	<ul style="list-style-type: none"> <li>No impact</li> </ul>	<ul style="list-style-type: none"> <li>No impact</li> </ul>
	Laidley Hospital (William Street)	1.38 km south west of alignment of Ch 58.6 km	<ul style="list-style-type: none"> <li>No impact</li> </ul>	<ul style="list-style-type: none"> <li>No impact</li> </ul>
	Laidley Cultural Centre, Laidley Plainland Road	200 m north of Ch 57.2 km	<ul style="list-style-type: none"> <li>Potential for noise exposure</li> </ul>	<ul style="list-style-type: none"> <li>Potential for exposure to rail noise</li> </ul>
	Laidley Baptist Church (Laidley Cultural Centre, Laidley Plainland Road)	200 m north of Ch 57.2 km	<ul style="list-style-type: none"> <li>Potential for noise exposure</li> </ul>	<ul style="list-style-type: none"> <li>Potential for exceedance of noise criteria</li> </ul>
Grandchester	Grandchester State School	200 m south of alignment (with grounds within 130 m of alignment) at Ch 66.3 km	<ul style="list-style-type: none"> <li>Disrupted access during construction at Grandchester Mt Mort Road crossing.</li> <li>Safety of access for students walking or cycling from residential area north of the alignment.</li> <li>Potential for construction noise impacts</li> <li>Parent concerns about the school's learning environmental and local connectivity may result in decreased enrolments, which in</li> </ul>	<ul style="list-style-type: none"> <li>Potential for exceedance of noise criteria</li> <li>Visual and pedestrian access to reserve affected</li> </ul>



Locality	Facility			
			turn could reduce the school's resources and/or viability.	
	Grandchester Community Hall	120 km south of alignment (with grounds adjacent to alignment) at Ch 66.3 km	<ul style="list-style-type: none"> <li>Potential for construction noise</li> </ul>	<ul style="list-style-type: none"> <li>Potential for exposure to rail noise</li> </ul>
	Saint Peter's Catholic Church George St & Symes St	360 m north of alignment at Ch 66.3	<ul style="list-style-type: none"> <li>Potential for construction noise</li> </ul>	<ul style="list-style-type: none"> <li>Potential for exceedance of noise criteria</li> </ul>

**School bus routes**

Disruption to school access routes, travel time and school bus scheduling would be likely in Helidon, Gatton, Forest Hill, Laidley and Grandchester during both construction and operation. 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 shown in Table 7-5.

If the Project anticipates using Grandchester Mount Mort Road for personnel or Project-related vehicles, ARTC will consult with the Grandchester State School and Education Queensland to discuss the potential for any impacts on road safety for school students and families, and include specific actions and accountabilities with respect to school students' safety, as agreed with these stakeholders, in the Project's CEMP.

Temporary delays are also likely on roads where grade-separated road-rail interfaces (and level crossings) are being constructed.

During the Project's pre-construction period, ARTC will meet with the DET and all schools in Calvert, Gatton, Forest Hill, Grandchester and Laidley 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
- Identify all relevant school bus services and contact details for their operators, consult with bus service operators and provide sufficient information to schools and school bus operators to enable them to coordinate bus service timetables to minimise disruptions
- Identify any specific considerations (e.g. off-campus activities) which will be considered in the Project's TMP
- Confirm Project contact details for the construction period and for discussion of any concerns about the operational period.

**Table 7-5 School bus routes affected by alignment**

Route	Interface with alignment
Calvert	One route and two interfaces at Calvert Station Road
Forest Hill	One route with two interfaces at Hunt Street
Gatton	N/A
Grandchester	One Route and one interface at Grandchester Mount Mort Road

Route	Interface with alignment
	One Route and one interface at Rosewood Laidley Road
Grantham	N/A
Helidon	N/A
Laidley	One route and two interfaces at Laidley Plainland Road One route and one interface at Laidley Plainland Road One route and two interfaces at Paroz Road One route and two interfaces at Paroz Road
Lawes	N/A
Placid Hills	N/A

### University of Queensland Gatton Campus

The Project will not impact on the land use of the UQ’s Gatton Campus as the disturbance footprint is located within the existing West Moreton System rail corridor where located near the University, and the nearest building within the university campus is located more than 1 km to the north of the Project between Ch 48.0 km and Ch 49.0 km. There is however potential to impact on the pedestrian walkway to Gatton which is planned by the University. The Project’s design includes space for a future shared path to be provided between Placid Hills and Laidley, with a connection to the UQ Gatton Campus, as part of DTMR’s PCNP. It was also noted in consultation that UQ students include people with English as second language, whose needs will require consideration in communications about the Project, and in particular, safety campaigns.

### Utilities

The Project will require modification, diversion or realignment of any utilities and associated infrastructure which interface with the disturbance footprint. There are 662 identified impacted utilities or potential clashes, 56 per cent and 16 per cent of which involve Telstra and Energex assets respectively, with others including pipelines and optic fibre lines.

ARTC has held multiple discussions and workshops to discuss Project interfaces with utilities, access to easements, proposed resolutions and the new connections process (if applicable). The Project will obtain the relevant agreements with the utility providers to access and work in their easements including, where required, relocation of utilities which may be done by the utility provider under relevant legislation. Utility owners have different requirements and drivers related to treating impacted assets. It is also common for impacted assets owned by the same utility owner to have varying requirements depending on the characteristics and criticality of each asset to the owner.

Procedures will be developed and implemented to minimise the potential for service interruptions, but surrounding residences and businesses may experience temporary disruption to services from time to time as these services are relocated or upgraded. Affected businesses and residences will be notified in advance of any planned interruptions. Once operational, the Project will not impact on services and utilities within the area.

### 7.4.2 Health and community support services demand

West Moreton Hospital and Health Services (WMHHS) provides a range of health services across potentially impacted communities, and have advised that health resources are limited, with community mental health services still experiencing demand for support from people affected traumatised by the 2011 floods.

Across the full construction period, an average of approximately 190 personnel are expected to be required and the workforce will peak at 410 FTE early in Year 2 of construction. As construction personnel are expected to be primarily home-based and would access health services in their home communities, significant demands on local health and community services are not expected.

There is however potential for demand on local hospitals for minor injuries or sudden illness, with patients requiring treatment that is more complex would be sent to the Ipswich Hospital, a major acute hospital providing all major health specialties to the WMHHS services region. There is also the possibility of demand on hospital services as part of emergency response arrangements to any accidents during construction or operation.

ARTC will consult with the WMHHS in the pre-construction phase to plan for anticipated health service needs and will provide advance notice of its construction workforce ramp-up to Queensland Health and the PHNs. To avoid placing additional demand on local health services, the Project will employ paramedics to service key construction sites.

Consultation has identified a concern regarding the effects of construction activities and construction traffic on access to the Gatton Hospital, on William Street Gatton. The hospital is approximately 1.3 km south of the Project near Ch 43.6 km so would not experience any direct impacts such as noise, vibration or dust. However, the hospital already experiences traffic congestion and access issues (e.g. difficulty for patients and ambulances accessing the hospital) during school drop-off and pick up times. EIS Appendix U: Traffic impact assessment technical report predicted that the increase in traffic on William St during construction would be less than 2 per cent and on this basis, exacerbation of current access issues is not expected, however the Project will consult with Queensland Health during the detailed design phase to consider any localised issues which will be addressed as part of the TMP, for example minimising Project traffic in town during school drop-off and pick up times

Community and family support services may experience increased demands prior to and during construction, to assist people to cope with stress and/or disruptions to some households' living circumstances. The Project will consult with DCHDE 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 DCHDE, ARTC and community organisations.

In consultation with the PHNs, ARTC will extend the mental health partnership to include provision of emotional and practical support to assist residents (landowners and tenants) whose homes would be removed from the disturbance footprint. 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.

#### **7.4.3 Police and emergency services**

Emergency services are provided from police, ambulance and fire stations based in Helidon, Gatton, Laidley and Rosewood, with additional fire stations at Woodlea, Forest Hill, Grantham and Blenheim. Large scale emergency responses are coordinated from Ipswich. Local services report being stretched, partially as the result by population growth occurring at Ripley Valley and Rosewood.

The construction workforce would see a minimal redistribution of the 'daytime' population in the SIA study area but may lead to an increase in demand for traffic policing on roads used to access the EIS investigation corridor.

Emergency service providers anticipate that the Project would increase demands on their resources during construction through a combination of:

- Workplace accidents
- The potential for traffic accidents associated with workforce commuter traffic and an increase in heavy haulage and large load vehicles
- Theft of materials from laydown areas (in particular, metal theft)
- Disputes about land acquisition
- Protests about the Project.

Early planning and clear, regular communication would be needed to ensure that service providers are well briefed on the nature of incidents that may occur, enabling them to plan ahead for the additional resources needed.

It is expected that accessibility for emergency services will 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. The Project will establish regular communications with QPS, QAS and QFES, to notify them in advance of planned road closures/interruptions and large load movements so that they can plan for alternate access routes when needed.

Helicopter access arrangements require complex calculations and will require consultation between the Contractor and emergency services during the detailed design process.

Measures to reduce the impacts of Project construction on 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
- Ongoing, regular co-operation with police and emergency services providers to plan for the operational phase.

Arrangements between the Project, Police and emergency service providers, defining appropriate and co-ordinated responses and communication in the event of accidents and other emergencies, will be developed during the detailed design phase to assist the efficacy and efficiency of emergency service responses.

Residents in rural and rural residential areas were concerned that Project works would interrupt local connectivity to fire trails and access tracks used to defend homes and properties from fires during construction or operation.

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 landowner evacuation during emergency incidents (e.g. bushfire) or on emergency vehicles' response times. Proposed mitigation 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. This consultation with the QFES and local rural fire brigades will confirm the location of access tracks which may be affected by the Project's detailed design, and the actions required of the Project in order to ensure firefighters' continued access to areas that they are currently able to service. Emergency access has been addressed during the Project design process. A Rail Maintenance Access Road (RMAR) strategy has been developed as a part of the design to provide access to the rail corridor during construction and operation for emergency service vehicles. The RMAR enables access for the full length of the alignment and regular access has been provided from the RMAR to public roads.

During operations, accessibility and response times for emergency services would be impeded by the likelihood of encountering passing trains at level crossings. Assuming only one level crossing is encountered en route, there would be a delay of approximately two minutes. In an emergency, such a delay can have serious consequences e.g. a delay of three minutes can halve the chance of survivability for patient in cardiac arrest (Wiltshire J. 2015). The Project may therefore significantly alter the SIA study areas' current ambulance response times (Dept of Health 2016):

- Emergency (Code 1 potentially life-threatening event) with 50 per cent of responses currently achieved in 9.3 minutes in the West Moreton district
- Urgent (Code 2A requiring undelayed response) with 50 per cent of responses currently achieved in 15.4 minutes in West Moreton.

ARTC will facilitate QPS, QAS and QFES access to a schedule of train movements and provide information about alternative access points to reduce the likelihood that emergency response vehicles will be delayed at level crossings.

The operational workforce would not create any significant population increase and is therefore unlikely to result in any increased demand for local health services. However, any road/rail accidents associated with derailments, level crossing accidents, rail load loss, hazardous goods spills or other major incident would place significant demands on health and emergency services resources.

Early and regular communication would also be needed for the life of the Project between the rail operator and local disaster response co-ordinators (including the QPS, QFES, SES and Local Disaster Management Groups) to plan for effective disaster management co-ordination and emergency response. This may need to include a protocol between the rail operator and relevant emergency service providers that clearly sets out roles, responsibilities and expectations for communications.

#### **7.4.4 Recreational facilities**

Table 7-6 summarises the potential for impacts on parks and recreation facilities. Sites that would be significantly impacted during construction and operation, affecting the level and quality of their use, include:

- School Road Reserve and adjacent recreational grounds, Grandchester, which would be dissected by the alignment
- Apex Park in Gatton, which would need to be acquired to enable re-alignment of Golf Links Drive
- Gatton Bowls Club and Littleton Park, Gatton which are adjacent to the disturbance footprint and likely to experience impacts on amenity and access



- Forest Hill Recreation Reserve and Furley Park, Forest Hill, which are adjacent to the disturbance footprint and likely to experience impacts on amenity and access
- Move and Groove Dance School in Gatton which is approximately 70 m from the disturbance footprint and likely to experience noise impacts during construction.

A pedestrian bridge would be constructed across the alignment at the Gatton Station providing safe pedestrian access near the town centre. To ensure equitable access and to accommodate the older population in Gatton, this overpass will include provision for lifts.

There are no formal cycle networks in the EIS investigation corridor, however, LVRC is planning a detailed walk/cycle plan for Gatton, including creating connections to the Gatton UQ campus (LVRC, undated). The Project will consult with LVRC about their plans for pedestrian and cycle access to enable alignment with Council plans wherever possible.

There is likely to be some disruption to pedestrian and cycle access to the following venues due to Project construction which may reduce participation in these modes of activity:

- Gatton:
  - William Kemp Park (access from residential area north of the alignment) – construction impact only
  - Gatton Showground (access from residential area north of the alignment)
  - Lockyer Valley Sports and Aquatic Centre (access from residential area north of the alignment)
  - Move and Groove Dance School (access from residential area north of the alignment)
  - Cahill Park Sports Complex (access from residential area south of the alignment)
- Forest Hill: Forest Hill Recreation Reserve and Furley Park (access from main township area)
- Laidley Cultural Centre (access across alignment on Laidley Plainland Road)
- Lockyer National Park.

Acquisition of land used by the Gatton Jubilee Golf Course Council will also be required. An interface agreement with the Golf Club is being developed, including compensation for the loss of land and requirement to replace a tee area and one hole. An opportunity to secure additional surface water storage as part of the Project was identified and will be considered as part of the detailed design process.

The Gatton Bowls Club identified concerns regarding access to parking spaces (currently leased from QR) and the potential for physical impacts to the greenskeeper's shed requiring relocation. The detailed design will include consideration of the Bowls' Club's access requirements (i.e. provision of alternative road access arrangements if required, and provision of alternative parking spaces if the QR land was no longer available). The potential for operational noise impacts to affect the Club was also raised, however this facility has not been identified as a sensitive receptor where operational noise criteria would be exceeded.

LVRC has also advised that care would be needed to ensure the railway did not exacerbate the existing fire ant pest problem, which is already reducing community use of affected parks. This has been addressed in the EIS Appendix I: Terrestrial and aquatic ecology technical report, as summarised in Section 7.4.5.

During the detailed design process, ARTC will consult with the LVRC and ICC to identify measures to reduce potential impacts on the amenity of or access to recreational facilities, which may include design refinements e.g. footpath connections and measures to offset impacts on facilities e.g. investment in parks. This will include consideration of the need to offset the loss of Apex Park in Gatton and any loss of amenity in the School Road Reserve in Grandchester.

The Project’s TMP will include a particular a focus on pedestrian and cycle safety for residents accessing parks and recreational facilities in the communities identified in Table 7-6.

**Table 7-6 Potential impacts on recreation facilities**

Locality	Facility Impacted	Proximity/Affect	Nature of potential impact
Helidon	Lockyer National Park (two sections proximate to Project) which is popular for remote bushwalking, 4WD and motorbike touring	Section at 3 km north of the alignment at Ch 27.1 km Section at 2 km north of alignment at Ch 29.0 km	<ul style="list-style-type: none"> <li>Potential disruption to access via Seventeen Mile Road and Airforce Road, during construction</li> </ul>
	Helidon to Ravensborne Trail circuit, a mountain bike route	Follows Seventeen Mile Road east of Helidon adjacent to the alignment near Ch 28.8 km	<ul style="list-style-type: none"> <li>Potential disruption to access along Seventeen Mile Road during construction</li> </ul>
Gatton	Gatton Showground (Spencer Street) – multi-purpose recreation and sport venue, including Gatton Indoor Sports Centre, and Lockyer Indoor Equestrian Centre	250 m south of alignment at Ch 44.0 km	<ul style="list-style-type: none"> <li>Access to the showground likely to experience temporary disruption due to crossing construction and road works on Spencer Street and Eastern Drive</li> <li>The Showgrounds’ amenity may be impacted by noise and/or dust during construction</li> </ul>
	Lockyer Valley Sports and Aquatic Centre	350 m south of alignment at Ch 44.0 km	<ul style="list-style-type: none"> <li>Disrupted pedestrian and cyclist access from residential area north of the alignment, crossing at Gaul St and Eastern Drive (existing overpass) during construction</li> <li>Potential for disrupted vehicular access during works to eastern drive/Spencer Street during construction</li> </ul>
	Wilks Park (Eastern Drive) – small recreation park with play opportunities for older children	Adjacent to alignment at Ch 44.4 km	<ul style="list-style-type: none"> <li>Noise exposure during construction</li> <li>Noise exposure during operation</li> </ul>
	Apex Park (Chadwick Road) small recreation park with play opportunities for young children	Adjacent to alignment at Ch 44.4 km	<ul style="list-style-type: none"> <li>Potential for acquisition due to the re-alignment of Golf Links Drive</li> </ul>
	Move and Groove Dance School - dancing club	70 m south of alignment at Ch 43.6 km	<ul style="list-style-type: none"> <li>Noise exposure during construction and operation</li> <li>Disrupted pedestrian access for students walking or cycling from residential area north of the alignment, crossing at Gaul St and Eastern Drive (existing overpass)</li> </ul>
	Gatton Bowls Club and Littleton Park - recreation facilities and playground (Old College Road)	Adjacent to the alignment at Ch 43.4 – 43.6 km (club house 70 m north of alignment)	<ul style="list-style-type: none"> <li>Noise exposure and potential impact on accessibility during construction</li> <li>Noise exposure during operation</li> </ul>

Locality	Facility Impacted	Proximity/Affect	Nature of potential impact
	William Kemp Park (East Street) - recreation park with picnic and playground facilities	200 m south-west of alignment at Ch 43.2 km	<ul style="list-style-type: none"> <li>Noise exposure during construction and operation</li> <li>Disrupted pedestrian and cyclist access during construction from residential areas north of the alignment, crossing at Smithfield and Old College Roads and Gaul/Williams Street</li> </ul>
	Cahill Park Sports Complex (Bauraba Street) – main sports park in Gatton. Sporting infrastructure includes rugby, netball, cricket, and touch football	720 m north of alignment at Ch 44.4 km	<ul style="list-style-type: none"> <li>Disrupted pedestrian and cyclist access from residential areas north of the alignment, at Gaul/Williams Street crossing</li> </ul>
	Gatton Jubilee Golf Course	Adjacent to alignment between Ch 44.2 km and 45 km (clubhouse is 400 m south of Ch 44.4 km)	<ul style="list-style-type: none"> <li>Land acquisition required, affecting 13<sup>th</sup> tee. Possible disrupted use of Chadwick Road running along rail alignment during construction – minor use road only.</li> </ul>
<b>Forest Hill</b>	Forest Hill Community Hall, Recreation Reserve and Furley Park (Palm Avenue) – tennis cricket and other sports, picnic and playground facilities	Adjacent to the rail alignment at Ch 52.1 km	<ul style="list-style-type: none"> <li>Disrupted pedestrian and cyclist access from main township area across alignment at Victoria Street to Railway Street; and from Dodt Road to Railway Street</li> </ul>
<b>Laidley</b>	Laidley Golf Course	1.55 km south of alignment at Ch 55.8 km	<ul style="list-style-type: none"> <li>No impact anticipated</li> </ul>
	Laidley Cultural Centre (Laidley Plainland Road, Laidley North) - includes an auditorium, function room and squash courts and playing fields Laidley RSL constructing relocated facilities near Cultural Centre	200 m north of Ch 57.2 km	<ul style="list-style-type: none"> <li>Noise exposure possible during construction</li> <li>Noise exposure during operation</li> <li>Disrupted pedestrian and cyclist access at crossing of alignment on Laidley Plainland Road during construction</li> </ul>
<b>Grandchester</b>	Grandchester Community Hall, School Road Reserve (and recreational grounds)	Alignment dissects recreational grounds north of the park’s picnic and playground recreational facilities	<ul style="list-style-type: none"> <li>Severance of the School Road Reserve</li> <li>Noise and visual amenity impacts on park users during construction</li> <li>Noise impacts for users of the park during operation</li> </ul>

#### 7.4.5 Physical health and environmental qualities

##### Noise and vibration

The potential for noise to affect the amenity and health of residents near the disturbance footprint was a key concern for community members. The Project’s operation would generate low and high frequency noise associated with running trains and trains idling at crossing loops. With the location of the Project through existing townships and settlements and its proximity to residential properties, the Project would be likely to generate long-term noise exposure for some residents.

The World Health Organisation (WHO) states that “excessive noise seriously harms human health and interferes with people’s daily activities at school, at work, at home and during leisure time”. It can disturb sleep, cause cardiovascular and psychophysiological effects, reduce performance and provoke annoyance responses and changes in social behaviour” (WHO, 2018).

WHO’s noise Guideline Development Group notes that the main body of evidence for its recommendations on railway noise was based on annoyance studies, with few reliable studies for other health outcomes available, so there is uncertainty about the effects of rail noise on health. The potential for ground-borne vibration to annoy people was also noted (*Ibid*). The WHO guidelines indicate that at source interventions (such as rail grinding to reduce noise), new rail infrastructure and communications could reduce the impacts of rail noise.

As noted in Section 7.1.4, the Project’s operation will result in noise levels which could affect the amenity of up to 285 receptors where noise levels would trigger the investigation of noise mitigation in 2026 (with a potential additional 30 receptor triggers in 2040). This includes potential triggers of night-time triggers, which may affect the ability to sleep and may affect residents’ wellbeing.

The Contractor will implement the mitigation and management measures proposed in EIS Appendix P: Operational railway noise and vibration technical report, which is expected to mitigate the potential for rail and train noise to affect the wellbeing of residents where exceedances of noise levels would otherwise result. The Project will also undertake proactive consultation with residents within 250 m of the disturbance footprint in urban areas and within 500 m of the disturbance footprint in rural areas (noting that the denser urban form in urban areas provides buffering to properties further away), to identify specific concerns and where possible, tailor any site-specific noise mitigation which are required to address residents’ needs.

### **Air quality**

Residents living near the EIS investigation corridor (and particularly near crossing loops) have raised concerns that diesel emissions from freight trains will affect air quality, with potential to have adverse impacts on their health. Diesel emissions contain concentrations of particulates, including black carbon, and have been declared a carcinogen by the WHO (NSW Environmental Protection Authority, 2018).

Fine particles (represented in air quality modelling as PM<sub>2.5</sub>) are more likely to affect health than large particles (represented as PM<sub>10</sub>) because they are small enough to be breathed into the lungs (EPA Victoria, 2019). Overall, there is limited research on concentrations of and human exposure to PM<sub>2.5</sub> (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 in rail yards and enclosed rail stations (Jaffe et al. 2015; Rail Safety Standards Board. 2016; van Essen. 2008).

Local residents have also raised concerns that use of the Inland Rail corridor to transport coal would release dust which could affect community health.

There is limited Australian research on any links between coal dust from trains and health impacts to residents along the alignment. A Queensland investigation into PM<sub>10</sub> and PM<sub>2.5</sub> 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, Queensland Health concluded that the dust concentrations measured were unlikely to result in any additional adverse health effects (DSITIA 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).

As noted in Section 7.1.4, ARTC will require rail service operators to apply a veneer coating to loaded coal carriages transported on the rail line, to prevent the release of coal dust.

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 K: Air quality technical report). As noted in Sections 7.1.3 and 7.1.4, the results of air quality risk assessment for the Project indicate that the unmitigated air emissions from the construction phase of the Project pose a low risk of human health impacts, and the results of air quality risk assessment for the Project's operation indicate that compliance with air quality goals has been predicted for all pollutants of concern. Full details are provided in EIS Appendix K: Air quality technical report.

## **Water**

Water will be required for dust control, site compaction and reinstatement during construction. ARTC acknowledges community concerns regarding the potential for the Project to impact on other users' access, and the importance of water to the agricultural industry, particularly during droughts. Potential water sources investigated include extraction of groundwater and/or surface water, private bores and watercourses. This will be further explored prior to construction in consultation with local councils and landowners. Where water is not available, it will be transported to work sites via tanker truck and stored in temporary storage tanks (refer EIS Chapter 6: Project description).

With respect to water quality, assessment of potential impacts on surface water during the construction phase (EIS Appendix L: Surface water technical report) indicated that the application of mitigation measures relevant to surface water quality would be sufficient to mitigate most potential conceivable impacts, such that the residual significance would be low. During the operation phase, potential impacts to water chemistry were assessed as possible, and additional measures in the form of a water quality monitoring program were recommended.

Mitigation measures would ensure that where the water quality objectives for receiving waters (Lockyer Creek and Bremer River sub-catchments) are currently being met they will continue to be protected, and where the water quality objectives are not currently being met, the activities of the Project would not worsen the environmental conditions.

Consequently, impacts on community health relating to the use or quality of water are not anticipated.

## **Flooding**

Potential flooding impacts are described in EIS Appendix M: Hydrology and flooding technical report.

The Project crosses the floodplain of the Lockyer Creek and its tributaries, and Western Creek, a tributary of the Bremer River. Hydrologic and hydraulic modelling was undertaken for each of these catchments with the models calibrated to multiple historical events using stream gauge records, community feedback and available flood anecdotal data. The hydraulic models were run for a suite of design events from the 20 % AEP event to the 1 in 10,000 AEP and Probable Maximum Flood events.

The hydrologic and flooding assessment has demonstrated that the Project is predicted to result in impacts on the existing flooding regime that generally comply with the flood impact objectives (refer below). Best practice flood risk management, including sensitivity testing, has been applied in developing the Project design to minimise risk to life, property, infrastructure, the community and environment. This has included consideration of flood risk for properties and businesses, including in and around Grantham, Gatton, Forest Hill, Laidley, Grandchester and Calvert.



The Project's objective is that changes in peak water levels as the result of the Project will meet the following limits:

- An increase of not more than 10 mm for existing habitable and/or commercial and industrial buildings/ premises (e.g. dwellings, schools, hospitals, shops.)
- An increase of not more than 50 mm for residential or commercial/industrial properties/lots where flooding does not impact dwellings/buildings
- An increase of not more than 100 mm for existing non-habitable structures (e.g. agricultural sheds, pump-houses.) and for roadways
- An increase of not more than 200 mm with localised areas up to 400 mm for Agricultural and grazing land/forest areas and other non-agricultural land.

The outcomes of the assessment indicate that generally, the Project design meets the above limits with a number of localised areas (generally agricultural land or local roadways) along the Project alignment where these limits are slightly exceeded. The assessment indicates that there would be localised increases in the duration of inundation at the same locations where peak water levels are increased. These changes in inundation duration do not affect flood sensitive receptors except for Dodt Road and Hall Road where there would be minor increases, which was assessed as a negligible impact on the amenity of the roadways.

With respect to flood flow distribution, the assessment documented in EIS Appendix M: Hydrology and flooding technical report predicts that the Project would have minimal impacts on flood flows and floodplain conveyance/storage. In general, changes in water velocities were also expected to be minor, with most changes in velocities experienced immediately adjacent to the Project alignment and no flood sensitive receptors impacted.

EIS Appendix M: Hydrology and flooding technical report also details an assessment of blockage of drainage structures, for 0 per cent, 25 per cent and 50 per cent blockages, finding that the resulting changes in peak water levels associated with the Project alignment are still localised and would not impact on any flood sensitive receptors.

Assessment of potential changes to flooding for extreme (1 in 2,000 AEP and 1 in 10,000 AEP events) and Probable Maximum Flood events indicated that:

- Between Helidon and Lawes, the changes in peak water levels at flood sensitive receptors are a small percentage change as compared to the existing flood depth (<10% for most locations)
- In the vicinity of Forest Hill there are slight decreases in peak water levels under the 1 in 2,000 AEP and 1 in 10,000 AEP events and a small percentage increase in overall depth under the PMF event
- Between Grandchester and Calvert, increases associated with the Project alignment are generally small (<50 mm) under the 1 in 2,000 AEP and 1 in 10,000 AEP events. Larger impacts could occur under the PMF event where there are already high flood depths as would be expected under such a rare event.

Appendix M: Hydrology and flooding technical report provides detailed design, engineering and mitigation measures to mitigate the risk of increased flooding on rural, agricultural and residential land.

A comprehensive consultation exercise has been undertaken to provide the community with detailed information and certainty around the flood modelling and the Project design. In future stages, the Project will:

- Continue to work with landowners concerned with hydrology and flooding throughout the detailed design, construction and operational phases of the Project

- Continue to work with directly impacted landowners affected by the alignment throughout the detailed design, construction and operational phases of the Project
- Continue to work with local Councils, state departments and local flood specialists throughout the detailed design, construction and operational phases of the Project.

### **Waste management**

EIS Chapter 21: Waste and resource management discusses the sources, impacts, mitigation measures and management strategies pertaining to Project wastes, with an emphasis on adhering to the waste management hierarchy. This chapter also describes the Project's generation and management of waste which will include green waste from vegetation clearance, construction and demolition waste, general waste, hazardous waste and recyclables.

Waste facilities in Toowoomba and waste disposal and composting facilities near Ipswich are likely to be used by the Project. The Lockyer Valley also has waste management facilities, however their capacity is smaller than those of Toowoomba and Ipswich LGA facilities, so large volumes of waste may affect their ability to service the local communities. Available and permissible annual capacity of waste management facilities will be confirmed in consultation with the relevant operators prior to commencement of construction.

The risks of excessive green waste, reduction of community access to landfill, controlled or uncontrolled release of waste affecting land, surface waters or dependant ecosystems were rated as possible during the construction phase, whilst an increase in greenhouse gas (GHG) emissions and a decrease in amenity arising from waste transportation activities were rated as likely. During the operational phase, controlled or uncontrolled release of waste was rated as possible, whilst maintenance works could also potentially affect community access to landfill facilities, or result in an increase in waste-related transportation.

EIS Chapter 21: Waste and resource management outlines mitigation measures based on an assessment of design data and infrastructure availability, following the waste management hierarchy with avoidance/reduction of waste as the most preferred management option, and disposal the least preferred option.

### **Land contamination**

EIS Chapter 20: Hazard and risk, discusses the results of hazard and risk assessment undertaken for the Project. The Project is generally located within existing road/rail infrastructure where possible, minimising the need to develop land that has not previously been subject to disturbance for transport infrastructure purposes. This will minimise impacts of Project activities to land resources. EIS Chapter 20: Hazard and risk has identified the potential for:

- The disturbance of contaminated soil or groundwater during Project activities with potential to contaminate previously unaffected soil or groundwater, with residual risks rated as medium for the construction period, and low during operations
- Contamination of land resources through the transport or movement of existing contaminated soil/groundwater, or through leaks or spills leading to migration of contaminants, also with residual risks rated as medium for the construction period and low during operations.

Contact with contaminated land may affect human health through ingestion (breathing in particles) or through dermal (skin) contact with contaminants. The draft Outline EMP (refer EIS Chapter 23: Draft Outline Environmental Management Plan) sets out a range of mitigation measures which will limit the impact of Project activities on land resources.

## Fire ants

Consultation participants in the Lockyer Valley raised the potential for the existing fire ant issues to be exacerbated by construction activities or rail transport. EIS Appendix I: Terrestrial and aquatic ecology technical report notes that the Project will traverse areas contained within red imported fire ant biosecurity zone 2, therefore there will be restrictions around the movement of materials that could spread the fire ants. A Biosecurity Management Plan will be developed for the Project and will include requirements for pre-clearing surveys to determine the risk of pest such as fire ants being present, and development of measures to prevent the spread of fire ants.

### 7.4.6 Mental health

Mental health is one of eight national health priority areas designated by the Australian Government and the State governments (Commonwealth of Australia. 2004). Anxiety, depression and hypertension are amongst the most common health issues in Australia and can have either a temporary or prolonged effect on a person's quality of life and day-to-day functioning (Harrison C et al. 2017; Commonwealth of Australia. 2004).

Concern about potential impacts on character and amenity, accessibility, property acquisitions, and potential exposure to noise, vibration and airborne pollutants is a cause of stress and anxiety for many residents living in or near the disturbance footprint. Whilst most people can cope well with a level of stress and anxiety, others don't. Consultation has also revealed significant opposition to the Project's alignment, coupled with feelings of anger, fear, distrust and a sense of disempowerment. Research shows that for people who oppose them, major projects can raise stress levels, erode peoples' sense of control and cause distress induced by environmental change (University of Melbourne, 2018).

### Construction impacts

The landscape through which the Project would pass is important to Traditional Owners. Indigenous people view their health in a holistic context that encompasses mental health, physical, cultural and spiritual health, with land also central to wellbeing (NACCHO website, 2018). Any severance from or damage to cultural heritage features, and changes to the cultural landscape, may add to an ongoing sense of cultural loss and dislocation, with potential for negative effects on health (Calma T et al. 2017; Dept. of Health and Ageing 2013).

Some people whose properties would be wholly or partially acquired for the Project are experiencing stress and anxiety about property resumptions, and in relation to perceptions of Project impacts on their quality of life, as outlined in Section 7.1.2. Stakeholders have identified that community members are experiencing stress related to the Project which is impacting on mental health.

Where construction noise intrudes on daily activities, or affects the ability to sleep, residents are likely to feel stressed and angry. Construction at level crossing and grade-separated crossings is likely to impede travel times for residents, businesses, school bus services and emergency services, which may also cause frustration.

Local communities have been highly sensitised to the impacts of flooding as a result of floods which caused the deaths of community members and the destruction of towns, homes and farms, so concern about the Project's potential to change or increase flood impacts is also a considerable source of anxiety for many community members.

In summary, property acquisitions, construction noise and disruptions to local connectivity are likely to generate frustration and anxiety within local communities, potentially impacting mental wellbeing and health for some people. The primary triggers would be:

- Uncertainty for landowners about property acquisitions

- Concern about the potential for homes, farms and roads to be impacted by floods or increased flood duration
- Noise and vibration disturbance, particularly for residents and students in proximity to the disturbance footprint
- Disruptions caused by route severance and travel time delays for everyday mobility, and for conducting business, farming, emergency and other service activities.

In isolation or in combination, these triggers for stress and anxiety may affect individual, family and community wellbeing. Local residents of Grantham may be particularly sensitive to Project impacts given many are still recovering from the trauma of the 2011 floods in which a number of people died, and which led to the relocation of part of the Grantham settlement. Grantham in particular has a higher rate of people with a core disability compared to other potentially impacted communities, and mental health services still provide support to people affected by the floods.

ARTC will provide transparent and accessible information to landowners and local community members about the property acquisition process, disruptions to the road network, the results of the EIS, and the strategies proposed to mitigate impacts on health, amenity and connectivity. The Project will maintain ongoing engagement with landowners who are adjacent to the EIS investigation corridor throughout the construction phase (subject to their agreement, as some will be fatigued by Project consultation). This engagement will focus on supporting affected residents' wellbeing, through assistance to access and understand Project and EIS information, support for effective resolution of complaints, and timely information about environmental changes such as demolition of dwellings within the EIS investigation corridor, road re-alignments and activities which will cause noise.

ARTC is committed to supporting the wellbeing of communities impacted by Inland Rail and recognises that early activities during the Project's reference design stage may cause concern or anxiety in the community. To address this, ARTC has initiated a Mental Health Partnership with the Darling Downs and West Moreton PHN 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.

Early implementation has resulted in increasing the availability and access to Beyond Blue's New Access program. The service 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. Additionally, mental health training for ARTC Inland Rail staff who engage with stakeholders has been undertaken.

The Project would generate direct employment opportunities for up to 410 people during the construction period. Access to stable employment can support mental health by enabling financial and housing security, self and family care, and social connections, all of which are beneficial to mental health, particularly for people who were previously unemployed. These benefits would be enhanced if the Project employment is obtained by community members in areas and groups where unemployment rates are high, e.g. Forest Hill, Gatton, Helidon, Laidley and Laidley North, Indigenous people and young people in the SIA study area.

## Operation

Noise exposure is defined as any unwanted, uncontrollable, or unpredictable sound (van Kamp, et al (2008). Long-term noise exposure is associated with anxiety and depression and can contribute to sleep disturbance and adverse physiological effects (including cardiovascular health, muscular tension and hormonal changes) (Commonwealth of Australia 2004; van Kamp et al. 2008). An estimated 12-15 per cent of the general population is likely to be extremely sensitive to noise, with people who have an existing mental health issue (such as anxiety or depression) likely to be more sensitive (Commonwealth of Australia. 2004; van Kamp et al. 2008).

As noted in Section 7.1, the Project's both construction and operation have potential to result in noise which exceeds the noise criteria for nearby homes, businesses and facilities. The Project has adopted a comprehensive suite of noise mitigation measures (refer EIS Chapter 23: Draft Outline Environmental Management Plan) to reduce the potential for noise, and will consult with the owners of dwellings where noise mitigation is required, to identify property-specific mitigation measures to avoid exposure to noise at levels which would disturb residents' sleep or otherwise impact on their health. Notwithstanding, rail noise may remain a source of stress and frustration for some residents.

Research has shown that traffic delays cause frustration and anxiety, which can increase blood pressure and heart rates, which may have consequences for long-term health. Research relating to perceptions of delay in public transport services has shown that anxiety can be relieved by providing accurate information about wait times (Morant, S 2015). Passing trains would delay motorists, cyclists and pedestrians at level crossings, with an estimated wait time of approximately two minutes for 1,800 m trains and longer wait times for 3,600 m trains. This information will be communicated to potentially impacted communities and more generally as part of ARTC's safety campaigns.

Along with noise exposure and traffic delays, other factors which could contribute to stress and/or anxiety include disruptions to farming activities (e.g. movements across the rail corridor) and ongoing concerns about the potential for homes, farms and roads to be impacted by flooding as a result of the Project.

ARTC will ensure that adjacent landowners to the Project have access to ongoing engagement mechanisms which support their awareness of Project impacts and mitigation, including noise, air quality and flooding impact management, and ensure a timely resolution to complaints regarding environmental stressors such as noise and vibration.

As noted, ARTC has developed a mental health partnership and has implemented a mental health program in the Project region.

It may also be necessary for local councils or the State Government to develop appropriate land use planning standards to mitigate the noise and vibration impacts on future development along the rail line, to reduce the risk of contributing to mental health issues for prospective residents.

### 7.4.7 Suicide

Suicide occurs at a higher rate when multiple risk factors are present, including mental illness, substance misuse, socio-economic disadvantage and social isolation (Public Health 2014). Evidence shows that access to a lethal means is a key risk factor in turning thoughts of suicide into actual suicide.

The Project would increase the opportunity for rail-based suicide attempts by providing access to a lethal means, with 82 per cent of all rail fatalities in Australia in 2016/17 suspected as suicide (Centre for Research and Intervention on Suicide, undated). Introduction of a lethal means may lead to an increased rate of suicide in communities where there is a predisposition to suicide (such as in the Lockyer Valley – East SA2 which has a suicide rate 1.8 times that for Queensland).



Suicide causes deep trauma within the affected families, friends and communities, and can exacerbate mental health issues. This would be heightened in communities where trauma levels are high (such as in disadvantaged and drought affected communities). Train drivers and rail employees who witness suicide incidents are also affected and can experience emotional trauma with lasting impacts (TrackSAFE Foundation). Rail suicide also creates significant demands and trauma for first response emergency services such as ambulance and police services.

An international literature review found evidence in support of mitigation strategies that are multifaceted, including:

- Restricting access to the track
- Media reporting guidelines to reduce the risk of copy-cat behaviour
- Suicide prevention programs including community and school-based programs
- Gate-keeper and primary healthcare provider training
- Telephone-based support services (Toronto Public Health. 2014; Submission 29 Attachment A).

Research also highlights the importance of delivering best practice in trauma counselling and management for rail employees who are impacted by rail suicide (TrackSAFE Foundation).

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.

#### **7.4.8 Community safety**

Feeling unsafe can influence levels of anxiety and can be a barrier to community participation and accessing services. The responses to the community survey conducted for this SIA valued their community as being family-oriented and safe. There appears to be a high level of perceived personal safety amongst communities in the western part of the SIA study area, but less so in the east (Laidley/Laidley North and Forest Hill) where perceived safety was lower than is typical for Queensland (refer Section 5.7.8). Crime levels are also higher than is typical for Queensland, especially in the Gatton area.

Given that the Project would be unlikely to generate a significant influx of temporary residents to the area and that construction would generally be during daylight hours, it is unlikely that perceptions of safety ('stranger danger') would change. However, the location of work sites near private homes might engender anxiety about perceived personal safety for some residents. The Project will implement a range of strategies to reduce residents' concerns about privacy or safety, as outlined in Section 8.5.

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 addressed 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 and reduce occurrences. However, heightened anxiety 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 - construction**

During construction there would be large and oversize loads interacting with other traffic, and there would also be increased traffic movements generated by employees from within the region driving to work sites. Increased light and heavy vehicle traffic on the Warrego Highway, Seventeen Mile Road and other roads in the area surrounding the alignment, such as Gatton-Esk Road, Gatton-Laidley Road, Gatton-Helidon Road, Old Laidley-Forest Hill Road, Laidley-Plainlands Road, Stokes Road and the Grandchester-Mt-Mort Road is expected during the construction phase.

EIS Appendix U: Traffic impact assessment technical report considers the potential for impacts on traffic safety with respect to the construction period, finding that some roads would require safety mitigation during construction. Roads where construction traffic could exacerbate existing safety issues requiring mitigation include:

- Cunningham Highway
- Gatton Helidon Road
- Gatton Laidley Road
- Laidley Plainland Road
- Logan Motorway (managed by Transurban)
- New England Highway
- Pacific Motorway
- Rosewood Laidley Road
- Toowoomba Connection Road
- Warrego Highway
- Ipswich Motorway
- Old Laidley Forest Hill Road
- Old Toowoomba Road.

Mitigation measures proposed in Appendix U: Traffic impact assessment technical report include:

- Fatigue management measures to be enforced for all workers
- Any required works to be identified in ongoing Road Use Management Plans prepared to support the Project

- Road Use Management Plans to address the possibility of physical works required at critical intersections, high pedestrian activity zones and around high impact construction zones
- Heavy vehicles may be associated with the construction activities and therefore use of school bus routes will be avoided if possible, or carefully managed to avoid conflicts
- Consideration will 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
- Level crossings will be provided with warning signage, line marking, and other relevant controls; in accordance with the relevant national standards outlined in Section 1.3
- Fencing will be provided along the rail corridor as required to ensure people and stock do not cross the Project.

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.

### **Traffic safety - operations**

During operations there is an increased risk of rail/road interface accidents (discussed in detail in EIS Appendix U: Traffic impact assessment technical report). Appendix U recommends the following mitigation measures to reduce the risk of accidents:

- Level crossings will be provided with warning signage, line marking, and other relevant controls; in accordance with the relevant national and ARTC standards
- Level crossings will be designed in order to provide for safe design standards where sufficient stacking and, sight distances, lane marking, and signage prevail for a design vehicle consisting of a low loader
- Assessments to be undertaken in compliance with the relevant technical standards to determine the appropriate protection type for the proposed crossing
- Road safety audits will be undertaken at the level crossings during design, pre and post opening in accordance with the Austroads guidelines.

EIS Appendix U: Traffic impact assessment technical report assumes that no new trips will be generated by the Project's workforce, 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.

Safety risks associated with Project operation include derailments, level crossing accidents with road-based vehicles, accidents associated with pedestrian and cyclist crossings, and railway-based suicide. Queensland has the fourth highest normalised rate of level crossing collisions in Australia, at 0.4 collisions per million train km travelled per year. Most of the serious injuries reported in Queensland since 2013 occurred within the greater Brisbane network (Queensland Government, 2014 Data).

Impacts are likely to include:

- Disruption to existing connectivity and travel routes due to road closures and re-alignment and delays at level crossings
- Risk taking behaviours at level crossings to avoid long wait times, increasing the risk of serious injuries and fatalities
- Running line and level crossing collisions with motor vehicles, pedestrians and cyclists

- Heightened risk exposure for young males, young drivers, school children, older pedestrians and people with disabilities.

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 (such as driving through flashing lights to 'beat' the train) are more pronounced when drivers had to wait for longer times (Larue. 2016). The study tested behaviours for wait times at level crossings of up to 10 minutes and 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 (*Ibid*).

ARTC will develop a road/rail 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. ARTC is also committed to continued delivery of railway safety messages to the community, through community engagement activities and campaigns to increase public awareness. Fact sheets and guidelines are also available on the ARTC website, which provide guidance to the community regarding safety around level crossings. An Operation Communication and Education Plan will be designed and implemented prior to the commencement of operations to provide information about Inland Rail operations and safety.

### **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 landowner evacuation during emergency incidents (e.g. bushfire) or on emergency vehicles' response times. Proposed mitigation measures proposed 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.

The Project also provides some benefits in the case of a bushfire, such as improved access to the area, acting as a firebreak and providing the opportunity to involve the local disaster management group/s during construction and operation.

### **Hazards**

The Project's hazard and risk assessment identifies potential hazards falling into low to medium risk levels, including potential incidents related to dangerous goods freight transport, potential use of explosives for Little Liverpool Range tunnel construction, trespass in the tunnel, pedestrian and community safety, interface with live trains and derailment or involving private access route, overbridges and emergency access.

Other potential risks to people and the environment, such as wildlife hazards, natural events, overbridge collapse, use of explosive and dust and vibration have been assessed with medium or low residual risks, given the low frequency of occurrence or minor impact associated in the event of such incidents occurring

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.

The Project will adhere to ARTC *Emergency Management Plan*, which provides a work procedure for managing recovery from an investigation of emergency requiring significant and coordinated responses on the ARTC network.

At the national level, the Inland Rail Business Case (ARTC, 2015) anticipates that Inland Rail as a whole will remove 200,000 truck movements from roads each year, resulting in improved road safety, a reduction in serious accidents, reduced truck volumes in regional towns, and a reduction in carbon emissions.

## 7.5 Business and industry

This section discusses the Project's potential impacts and benefits for farms, businesses and local industries.

### 7.5.1 Impacts on farms and agribusinesses

The Project encounters agricultural land which is predominantly used for irrigated seasonal horticulture and grazing on pasture and native vegetation. Some of those areas are designated as having particular agricultural significance as Class A or Class B agricultural land or Important Agricultural Area (IAA). As described in EIS Chapter 8: Land use and tenure, the permanent operational disturbance footprint will traverse significantly less than one per cent of land classified as being of Class A, Class B or IAA in both the Lockyer Valley and Ipswich LGAs. The extent of land acquisition required is described in detail in EIS Chapter 8: Land use and tenure.

Key issues of concern identified by agricultural businesses included:

- Concerns about the potential for proposed land acquisition to affect the viability of farms and farm infrastructure, including dams, greenhouses and irrigation infrastructure
- Concern about changes to access across the corridor to affect agricultural businesses' traffic movements
- Concern about flood risk for down-stream infrastructure impacts and potential for loss of topsoil in a flood event due to additional drainage
- Potential to modify the area's hydrology which could change flood risks and/or ability of properties to capture surface water.



Appendix G: Directly Impacted Properties of the EIS provides a detailed breakdown of impacted properties. The predominate land uses of properties within the permanent operational disturbance footprint include grazing modified pastures (one property), grazing native vegetation (85 properties), irrigated horticulture i.e. cropping (32 properties), residential (57 properties), and manufacturing and industrial purposes (three properties). Land parcels within the disturbance footprint also include lots used for services, easements, minimal uses and land in transition. The direct effects on land used for manufacturing and industrial uses would be marginal at less than 0.5 per cent for two properties and 3.5 per cent for the third.

Of the 86 lots where the predominant land use is grazing, 18 are land lease or State land, and the remaining properties are freehold. Of all grazing properties, approximately:

- 27 properties would have less than 1 ha affected
- 39 properties would have between 1 ha and 5 ha affected
- 15 properties would have between 5 and 10 ha affected
- five properties would have between 10 and 20 ha affected.

Indicative percentages of the land areas required within grazing properties range from less than 0.1 per cent to 100 per cent for eight lots, including seven lands lease properties and one freehold property.

Properties' individual circumstances (such as specific land uses within the property that are affected and the extent of severance) will determine the significance of land take or and severance, however it could be assumed that more substantial impacts on properties' use or productivity would generally occur with larger percentages of land required.

For the 32 lots where the predominant land use is irrigated horticulture, ranging in size 0.6 ha to 42 ha, there are approximately:

- 17 lots where less than 5 per cent of the lot would be required
- Six lots where between 5 and 10 per cent of the lot would be required
- Six lots where between 10 and 20 per cent of the lot would be required
- One lot of 9.6 ha where 37.1 per cent would be required, one of 6.27 ha where 68.5 per cent would be required, and one of 0.45 ha which would be wholly acquired.

Again, the effects of land acquisition on farms are generally related to the percentage area of land required, the extent of severance and the specific uses within the property that are affected. Properties where larger percentages of the land are required may experience substantial impacts. The Project's alignment avoids direct impacts on intensive livestock operations such as feedlots and poultry farms.

In summary, analysis of impacted properties indicates that one freehold grazing property and one freehold horticultural property would need to be fully acquired. Of the four grazing properties where more than 50 per cent of the land would be required, two are freehold properties. There are also two horticultural properties where more than 30 per cent of the land would be required of which one is a freehold property. The effects on other horticultural and grazing properties would vary according to the land area and the percentage of land required, the uses affected, and the extent of severance.

Impacts on cropping and grazing operations would include:

- Severance of landholdings and intrusion on pastures and paddocks, potentially leading to reduced productivity or viability of land parcels and/or businesses
- Intrusion on property infrastructure, including outbuildings and irrigation plant and equipment
- Impacts on on-farm movements and the ability to move machinery, stock and supplies across the corridor, and the location of level crossings on private roads

- Effects on water access, drainage or storage dams
- Dissection of rural residential properties with small scale agricultural production rendering land unfit for future farming use.

ARTC has conducted individual consultations with affected landowners to identify the potential for impacts on highly productive areas, farm management practices and farm infrastructure.

Where loss of agricultural land was unable to be avoided, the Project design placed the rail corridor around or as close as possible to property boundaries to reduce potential fragmentation and sterilisation of properties. Where land is fragmented or isolated, any impacts on operational farm requirements such as impacts on access, infrastructure and services will be managed and reinstated as soon as possible.

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.

Interface agreements with owners of directly affected properties will ensure construction activities are managed in accordance with ARTC's agreements with the landowners.

There is some possibility that the availability of agricultural labour would be reduced by Project workforce demands, however local farms rely heavily on the labour of 'backpackers' which are unlikely to be drawn to employment in Project construction. There is a possibility that the availability of work for seasonal pickers may be reduced through land acquisition, however this can't be quantified.

Most of the crop farms are small holdings, and some of the owners may require assistance to adjust their operations. The Project will provide liaison staff with local knowledge to work with landowners who are directly affected by or adjacent to the disturbance footprint to address property-specific impacts and where necessary, referral to services which can assist their adjustment to new circumstances.

As noted above, the permanent operational disturbance footprint will traverse significantly less than one per cent of land classified as being of Class A, Class B or IAA in both the Lockyer Valley and Ipswich LGAs. While the severance and/or acquisition of farms would be felt as loss to the local agricultural industry, a significant negative effect on the availability of land for horticulture and food production is not anticipated, with negligible potential for effects on food security (the availability of food to local and regional residents). Conversely, the Project's potential to increase agricultural producers' access to supplies and markets may support food security at a broader national level.

There is potential for retention of some laydown areas or other temporary facilities in the EIS investigation corridor for their legacy value to landowners or businesses, subject to engagement with directly affected landowners and/or the owners of affected public land, as relevant.

### **Effects on water bores**

Water bores are an important source of water for farmers, graziers and some residential properties. Assessment of the Project's potential effects on groundwater (EIS Appendix N: Groundwater technical report) found that, based on a search of the DNRME groundwater database, a total of 510 groundwater bores are identified within 1 km of the Project alignment, of which 384 bores are designated as 'functional'. The assessment found that some of these bores have the potential to be damaged or lost during construction, or to become inaccessible during construction or operation. ARTC will consult with affected bore owners to identify mitigation or 'make good' arrangements (i.e. replacement of the water source).

Reduced groundwater levels during construction due to seepage into cuts and the Little Liverpool Range tunnel have potential to impact groundwater users, however the assessment of groundwater drawdown (refer EIS Appendix N: Groundwater technical report) found that there are only two registered bores within the drawdown extents estimated with a possibility that one registered bore could be dewatered by cut seepage, and affected by longer term seepage during operations. The assessment found that there was a possibility that bores located near the Little Liverpool Range tunnel could be affected by tunnel construction.

There is also a possibility that unregistered bores could be directly affected during construction (through damage, severance of access or dewatering), or affected by long-term seepage or tunnel drainage during operations, affecting groundwater users' access to water.

Appendix N: Groundwater technical report proposes that ARTC undertake a landholder bore survey to identify the location of any bores that may be lost due to construction or operation and engage with licensed users to determine a mitigation strategy (for example replacement of water supply, if required). A groundwater monitoring strategy is also proposed to provide an ongoing assessment of potential impacts on bores.

### **Property connectivity and travel movements**

Construction of crossings and road realignments on private land may disrupt on-farm connectivity and property operations. The Project will ensure an appropriate level of access is maintained for landowners across existing crossings or through their property where affected by the rail corridor. Close consultation will be required with potentially affected landowners to identify existing stock and equipment movement paths. Crossings of roads on private properties will be designed in consultation with the landowners and will include consideration of the need to move stock, large equipment and vehicles across the corridor, but may result in delays for landowners using private roads across properties.

Delays in transportation to market may arise where the alignment intersects with arterial roads such as the Warrego Highway, depending on the extent of works and the degree to which traffic flow could be maintained, potentially impacting market access and transportation costs. Other roads which would be affected by road works and or crossings are discussed in Section 7.1.10.

The underpass for the West Moreton System rail line is too low for stock trucks travelling on Old College Road to use. There may be an opportunity to improve accessibility if the new bridge is high enough to accommodate the passing of stock trucks below.

There is one identified stock route reserve located to the south of the alignment at Calvert, adjacent to Bourkes Road West. This stock route reserve of approximately 2.02 ha has a classification of minor and unused. In addition to the stock route reserve, it is understood that there may be informal stock routes throughout the EIS investigation corridor used to transfer stock to various grazing paddocks and holding yards. Consultation is ongoing with landowners to identify impacts, if any, to informal stock routes.

### **Weeds and pests**

Landowners and agricultural businesses have raised the possibility that the Project could result in the spread of weeds and pests. Appendix I: Terrestrial and aquatic ecology technical report provides an assessment of the potential for weed and pest species to impact on biodiversity or agricultural practices, noting that proliferation of weed and pest species has the potential to occur during all phases of the Project, especially during the construction phase. The Project will develop a Biosecurity Management Plan as part of the CEMP, with detailed measures to manage and avoid the spread of weeds and pests. Further details are provided in EIS Chapter 23: Draft Outline Environmental Management Plan.

#### **7.5.2 Town centre businesses**

The Project passes through the commercial centres of Gatton and Forest Hill.

Businesses identified the potential for construction works to result in amenity impacts which could affect business trade including:

- Construction noise, vibration or dust which could affect businesses' amenity, including the enjoyment of outdoor dining and the amenity of accommodation facilities
- Impacts of construction activities on visual amenity and traffic movements in town centres
- Potential for the construction footprint to impact the development of a proposed extension to a major hardware store in Gatton (to be addressed through land acquisition and compensation arrangements).

Amenity impacts were also anticipated during the Project's operation, including:

- Impact on the visual amenity of streets and parks close to the Project footprint, with the intensification of the rail corridor and more frequent trains, which could affect the towns' historic and rural character
- Concerns about operational noise impacting on the amenity of Forest Hill and Gatton businesses closest to the rail corridor
- Concerns that houses impacted by operational noise could become unattractive to tenants.

Site-specific traffic issues were identified as discussed below.

It is likely that Project works (e.g. corridor construction, road re-alignments and construction of rail crossings) will require land acquisition affecting the boundaries of businesses located adjacent to the Project footprint, resulting in decreased land areas, the need to provide alternative street access for some businesses and the need to offset business parking arrangements affected by the footprint. The Project will continue engagement with businesses affected by land acquisition to provide up to date information on the Project and impacts as assessed in the draft EIS, and will require the Contractor when appointed to consult with each business that is adjacent to the footprint to take account of their specific needs. The Constructing Authority will coordinate the process for acquisition and compensation for loss of land with affected property owners.

Businesses were generally supportive of the potential for employment and supply opportunities during construction. Potential business opportunities identified in the construction phase included accommodation, meals and transport services. Some stakeholders also acknowledged opportunities to benefit the community through improved drainage works proposed as part of the Project's reference design.

### **Gatton**

The Project follows the West Moreton System rail corridor through Gatton, running roughly parallel to Hickey Street to the north (a residential area) and Crescent Street to the south. The Gatton town centre is generally defined by Crescent Street to the north, Eastern Drive to the east, Spencer Street to the south and East Street to the west. William Street, North Street and Railway Street are key locations for retail, hospitality and service-based businesses.

Traffic-related impacts during construction that were identified by businesses included:

- The potential for road works to affect passing trade, including impacts on businesses in town and access to a service station on Eastern Drive
- Traffic disruption due to crossing construction, road re-alignments and path construction works
- Potential to impact on the availability of parking in the Gatton CBD (Crescent Street/Railway Street) due to construction works.

During operations, potential traffic-related impacts were identified as including:

- Impact of the Gaul Street level crossing closure on residents north/south access, affecting through traffic to town centre businesses
- Potential for closure of the Gaul Street level crossing to affect pedestrian access to businesses in town and events such as processions to the ANZAC memorial
- Concerns about additional wait times at level crossings and implications for transport drivers
- Concern about pedestrian/cycle access over Eastern Drive.

As noted in Section 7.1.10, the closure of Gaul Street would remove a direct link for traffic to William Street in the town centre, with alternate connections maintained via Old College Road/Crescent Street (approximately 400 m west of Gaul Street) and Eastern Drive. Closure of Gaul Street is likely to result in inconvenience to motorists, but with a choice of other routes to the town centre available, residents are likely to adjust to the change in connectivity and continue to access the town centre, which provides a wide range of retail, commercial and community facilities. Pedestrian, cycle and mobility scooter access will still be available via a level crossing and the reconstructed Gatton Railway Pedestrian Road bridge. The Eastern Drive structure will also include cycle and pedestrian paths to maintain safe access for pedestrians, cyclists and people with mobility scooters.

Businesses in Crescent Street and Eastern Drive are likely to experience construction noise, disruptions to business access and potentially operational noise. The Gatton Railyards occupies the section of Crescent Street from Eastern Drive to William Street, providing some buffering of impacts such as noise and dust from works within the rail corridor, but significant works are also required to construct the Eastern Drive bridge, which may also result in traffic access disruptions, noise or dust. Businesses in this area are primarily transport and automotive businesses (e.g. Cooks Transport, Ultra-Tune Gatton, Gatton Tyres and More, Lockyer Valley Ford & Mitsubishi) but also include Agricultural Supplies and Vandy's Plumbing Supplies. East of the Project works on Eastern Drive are two service stations to which vehicle traffic may also experience delays. Specific consultation will be required with each of these businesses to ensure the needs of transport-related operations are considered in the detailed design, CEMP and TMP.

Further west, businesses near the disturbance footprint include Repco Gatton, Lockyer Mowers and Motorcycles, Australia Post, the Royal Hotel, the Commercial Hotel, Gatton Mufflers and Gray's Furniture and Bedding Centre. The amenity of these businesses may also be affected by noise, dust or increased traffic whilst construction of the rail corridor is occurring in Gatton.

The Royal Hotel and Commercial Hotel are located within 100 m from the alignment and as businesses based on entertainment and social interaction, are likely to experience a change in amenity and ambience during construction, with potential for rail noise to affect their amenity during operation.

Within the town centre, a wide range of business operate, including supermarkets, specialty shops, cafes, banks, and service businesses such as hairdressing, insurance, printing, employment, Council, Government and travel services. There is potential for audible construction noise in the Gatton town centre, and a likelihood that traffic access would be disrupted due to the construction of the rail corridor, Eastern Drive Bridge and the active level crossing at William Street. Road access to all businesses will be maintained during construction works, but the environment of the town centre may be less enjoyable whilst construction works are nearby, which may affect customers' willingness to patronise these businesses.

### **Forest Hill**

In Forest Hill, businesses which may be affected by construction noise, dust, traffic disruption, and potentially by operational noise, primarily in the Victoria Street/Gordon Street area, include the Lockyer Hotel, Forest Hill Hotel, cafes, shops and services. The amenity of the community market in Furley Park is also likely to be affected by noise during construction and operation.



As noted in Section 7.1.5, changes to the road network in Forest Hill to accommodate the Project include moving the level crossing from Hunt Street to align with Glencore Grove Road. Traffic-related impacts during construction that were identified by businesses included:

- Changes to through traffic in Forest Hill e.g. on Victoria Street as the result of the closure of Hunt Street which could affect business trade
- Impacts of construction traffic in the Forest Hill and Gatton town centres on character and business access.

Changes to the road network in Forest Hill to accommodate the Project may also result in reduced traffic on Victoria Road, potentially leading to decreased trade. An active level crossing is proposed at Hunt Street in Forest Hill to maintain pedestrian, bicycle and mobility scooter access, and vehicle access across the rail corridor would be provided at Glencore Grove Road approximately 100 m to the east, mitigating potential impacts on movements through town, but there is potential for business customers to be deterred by road works and changes to local character whilst construction is occurring.

The combined effects of construction noise, dust, traffic disruption, potential traffic queuing and parking problems in Forest Hill, and the change to the town's quiet, historic character during construction, may discourage customers and clients from using businesses in town.

The Lockyer Hotel and Forest Hill Hotel are located within 100 m from the alignment and are likely to experience a change in their amenity and ambience during construction, with potential for rail noise to affect amenity during operation. The Project may also require acquisition of a portion of the Lockyer Hotel's car park.

Of note, businesses in Forest Hill and Gatton support the Lockyer Valley's tourism trade, so deterrence of customers and visitors to local businesses may also affect trade for tourism businesses. Potential impacts on tourism businesses are further discussed below.

### **Mitigation of impacts on town centre businesses**

ARTC has consulted with businesses in the Gatton and Forest Hill town centres to explain any potential land acquisition processes as relevant, and discuss the results of design and EIS studies.

ARTC will actively encourage businesses in all potentially impacted communities to access the draft EIS and will meet with businesses in Gatton and Forest Hill to discuss potential noise, character, dust and traffic impacts in town centres and the measures proposed to address impacts during the EIS phase. This will include one-on-one consultation with each business where noise exceedances would be experienced to assist in designing property-specific noise mitigation measures.

The results of the consultation with businesses will inform:

- Development of the CEMP and TMP during the detailed design phase
- Detailed measures to be implemented in co-operation with businesses including:
  - Signage to ensure residents and visitors know how to move safely around town whilst construction works are occurring
  - The design of pedestrian and cycle access paths
  - Promotional strategies to offset loss of business trade due to roadworks and/or noise impacts.

As outlined in the draft Outline EMP (refer EIS Chapter 23: Draft Outline Environmental Management Plan), construction noise measures will include specific management measures for activities that could exceed the construction noise and vibration criteria. The Project will also implement a notification process to advise of significant works with potential for noise nuisance or vibration and fulfill other requirements necessary to comply with conditions of approval, subsequent approvals or regulatory requirements.

Performance criteria for management of traffic impacts are provided in EIS Chapter 23: Draft Outline Environmental Management Plan and include:

- A Construction Traffic Management Plan will be developed and implemented by the Contractor and communicated to all site personnel during site induction, including requirements for traffic routes and parking
- Access to private properties is maintained during construction, unless an acceptable solution is agreed with the landowner
- The construction workforce is provided with adequate on-site parking and use of parking is reinforced during induction and training
- Information about the timing and scale of changes to traffic and transport conditions on traffic networks in the vicinity of Project works is provided in advance to the local community, road users and on request to other people interested in the Project works.

ARTC will continue to work with business operators to reduce the potential for impacts on their amenity and access. Whilst environmental management and construction management strategies outlined in EIS Chapter 23 are expected to manage the extent of impacts, the character, amenity and trafficability of the town centres will be affected during construction, with potential for changes to local character and traffic arrangements to persist during operation. The Project will maintain ongoing engagement with businesses in Gatton and Forest Hill during the construction phase to ensure they are aware of upcoming works and potential impacts, support monitoring of the effectiveness of mitigation strategies, and seek business owners' inputs to refinement of mitigation strategies if required.

With respect to town centre character, the Project will work with the LVRC, Lockyer Chamber of Commerce and Industry, businesses in Gatton and Forest Hill and the Lockyer Valley Tourism Association throughout the remainder of the EIS phase to discuss proposed measures to mitigate impacts on local character during construction including:

- Locating construction compounds and ancillary facilities to minimise visual impacts
- Providing or retaining vegetation screens and other barriers where practicable to minimise visual amenity impacts
- Progressive rehabilitation of temporary construction areas in accordance with the Reinstatement and Rehabilitation Plan
- 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.

With respect to the operations phase, the Project will seek to create landscape settings that enhance or complement the local context for the social, environmental and economic benefit of local communities including:

- All components in an urban context will consider the appearance and careful integration of new structures, fencing and noise barriers
- Restoration of footpath and cycle route connections
- Maintaining and, where possible, improving connectivity to provide access to open spaces including recreational areas
- Providing enhanced planting and habitat creation, for example streetscape strategies within the vicinity of the Project alignment and street tree planting within Gatton, Forest Hill and Calvert
- Consideration of urban design input into bridge structures to minimise the impact on views

- Implementation of a Landscape and Rehabilitation Management Plan to define post construction maintenance requirements, monitoring requirements and completion criteria for areas defined in the landscape design and/or identified in the Reinstatement and Rehabilitation Plan.

The Project will conduct consultation via individual meetings and/or business workshops during the EIS and detailed design phases to discuss the proposed measures, and the results of this engagement will be considered as relevant in the development of the:

- TMP and CEMP
- Landscape and Rehabilitation Management Plan
- Community Wellbeing Plan.

Operational rail noise and traffic delays whilst trains are passing level crossings would be managed through the application of operational management standards as detailed in EIS Appendix P: Operational railway noise and vibration technical report and Appendix U: Traffic impact assessment technical report.

### 7.5.3 Labour draw

There is potential for the Project's skilled labour demands to draw tradespeople and professional staff from within local communities, potentially affecting the availability of personnel for other businesses and residents.

It is beyond the scope of the SIA to test or quantify these possible effects. The economic impact assessment undertaken for the Project (refer Appendix R: Economic impact assessment) provides more detail on potential impacts on employment levels in other industries in the SIA study area.

There may also be a draw of existing staff away from some businesses, causing temporary disruptions to business operations, however the level of unemployment in the SIA study area is likely to have increased significantly during March 2020-June 2020 as the result of COVID-19 restrictions (refer Section 5.4) increasing access to labour.

If multiple other projects as listed in Table 7-8 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.

It is also likely that businesses would benefit from increased trade from patronage by the additional workforce during the construction period. This could benefit service stations, cafes and auto supply shops.

### 7.5.4 Tourism

The Lockyer Valley and Ipswich Councils and communities have a strong focus on tourism development including nature-based/ecotourism, food/wine trails, adventure experiences and farm visits and stays.

The Lockyer Valley Tourism Destination Plan 2018 – 2023 (Stafford Strategies, 2018) notes that visitation to the Lockyer Valley has increased over the past ten years, and that domestic day trippers represented 69 per cent of the LGA's tourism market during 2015-2017. The plan notes that the majority of local operators are small businesses, and that local town centres play an important role in encouraging increased visitor stays and expenditure, so streetscapes and 'town attractiveness' are important to visitor appeal.

Businesses and facilities which are part of the tourism industry and are located near the Project include:

- Lockyer Valley Hotel on Victoria Street and Forest Hill Hotel on William Street in Forest Hill, which are within 50-100 m of West Moreton System rail corridor and therefore the Project alignment

- Royal Hotel and Commercial Hotel on the corner of Crescent Street and Railway Street in Gatton, which are within approximately 100 m of the West Moreton System rail corridor Gatton Showgrounds, which is adjacent to the works required for the Spencer Street/Eastern Drive overpass
- Laidley Cultural Centre, 200 m north of Ch 57.2 km, which is a major community event centre
- Berkeley Farm on Harm Road in Forest Hill, which is approximately 500 m south-west of the EIS investigation corridor at Ch 51.4 km, and offers events highlighting sustainable living
- Branell Homestead which caters for events tourism including weddings and celebrations, and includes accommodation, approximately 880 m east of Ch 59.8 km
- Lockyer National Park north of the alignment near Helidon, which is popular for remote bushwalking and 4WD and motorbike touring
- Cafes, restaurants and speciality shops in Forest Hill, Grandchester and Gatton.

Local tourism businesses' concerns about the Project's construction and operation include:

- Noise and vibration impacts on the amenity of town centres such as Forest Hill and Gatton
- Traffic disruption impacting the rural character
- The effect of rail bridges and viaducts on the scenic amenity of the Lockyer Valley and areas around Grandchester.

The likely impacts on tourism businesses during construction are as follows:

- The amenity of the Lockyer Hotel and Forest Hill Hotel in Forest Hill is likely to be affected by noise and for the Lockyer Hotel, changes to property access and parking arrangements
- The Royal Hotel and Commercial Hotel in Gatton are likely to experience noise and a change to the scenic amenity of the surroundings
- Construction noise, increased traffic and traffic disruption would impact on the quiet rural character and ease of movement in the Forest Hill and Gatton town centres, which host a range of cafes and speciality shops that contribute to tourism trade
- Road and pedestrian access to the Gatton showgrounds may be disrupted whilst works are occurring on Spencer Street/Eastern Drive, and there is potential for construction noise to be audible within the showgrounds whilst works are occurring in this area
- Laidley Cultural Centre may experience construction noise and changes to the character of views to its south and interruptions to access whilst the crossing of Laidley Plainlands road is constructed
- The scenic amenity of Grandchester may be affected by construction works in the rail corridor
- There is potential for road works, bridge construction and the visual impact of laydown areas to affect tourists' experience and travel times.

These impacts will be temporary whilst construction activities are undertaken in particular areas, but some impacts (such as laydown areas affecting local character and bridgeworks) may extend over longer periods.

The Project will consult with the LVRC, and with the owners of hotels and businesses in Forest Hill and Gatton to refine mitigation measures (including communication mechanisms, dust controls, noise mitigation measures and traffic management) to reduce impacts on their amenity and the attractiveness of the Gatton and Forest Hill town centres during construction.

The Project will also consult with the Gatton Show Society as part of detailed design planning for the Spencer Street/Eastern Drive overpass, to confirm peak event times and access requirements, and consider this where possible in the construction methodology to reduce impacts on event patrons.

Spicers Hidden Vale Resort, south of Grandchester, which includes accommodation, event hosting and restaurants, is a major local employer, and an important part of the Lockyer Valley's tourism offering. Direct impacts on the resort from the Project's construction or operation are not expected, however the resort is accessed from Grandchester Mount Mort Road which would be disrupted by construction of the Project through Grandchester. ICC stressed the importance of ensuring that Grandchester's character is protected, and that access to Spicers Hidden Vale Resort is preserved and promoted.

The owners of the Branell Homestead and Berkley Farm expressed concern regarding the potential for noise to affect the amenity of their properties. Assessment of noise impacts indicates that noise from construction would be unlikely to affect Berkeley Farm or Branell Homestead, and noise from operation would be within regulatory trigger levels for these two businesses.

With respect to the operational phase, stakeholders including the Lockyer Valley Tourism Association (LVTA) expressed concern about the impacts of the Project and bridge structures on the scenic character of the Lockyer Valley, with concerns this will damage the Valley's brand as a scenic and green landscape, and detract from the amenity of businesses with a view to the Valley. The LVTA provided examples of stone bridge designs which would complement the character of the area; however, the Project was unable to consider including stone bridges due to engineering, cost and maintenance requirements.

Some visitors will see the Project as diminishing the rural character and views to the Lockyer Valley, but others will find interest in Project structures. There is also potential for waiting times at level crossings to delay tourists, however traffic delays due to rail crossings and road intersections are a common occurrence and are unlikely to be a significant deterrent for visitors.

When the Project's detailed design is confirmed, ARTC will consult with the two Councils and with tourism-related businesses (including accommodation facilities, farms, restaurants, cafes and specialty shops) located within 5 km of the Project to facilitate a shared understanding of how impacts resulting from road works, changes to the road network or noise/vibration may affect tourism businesses. ARTC will then develop a strategy, working with tourism associations and the Ipswich and Lockyer Valley Councils, to ensure that generalised impacts on tourism values (such as traffic disruptions on key local tourist routes) are reduced wherever possible.

ARTC will also work with the LVTA and the Ipswich Tourist Operators Network to support their promotional and marketing campaigns during the construction period and the first two years of operation. This is expected to offset any deterrence of tourists as a result of the Project.

### **7.5.5 Local supply opportunities**

The capacity of businesses in the SIA study area to supply the Project, based on the business profile outlined in Section 5.4.3 includes:

- The Ipswich LGA has considerable business strengths in the construction industry with 1,868 registered businesses in 2016-2017
- Ipswich LGA also has strengths in the transport, postal and warehousing sectors which could be strengthened by the Project
- Whilst agriculture dominates the Lockyer Valley's LGA's business profile, the construction sector was also strong with 538 registered businesses
- Non-employing (owner-operated) businesses represented more than 60 per cent of businesses in each LGA indicating a high presence of sole operators, including farmers.

As such 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.



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 7-7. 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 SIA study area (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 Inland Rail. The outcomes of this procurement will determine the location of the sleepers' suppliers.

Project construction will also require a range of services which may be sourced from within the SIA study area as shown in Table 7-7.

**Table 7-7 Construction inputs**

Supplies	Services
Pre-cast concrete	Tree clearing
General and structural fill	Electrical installation and instrumentation
Ballast and capping material	Rehabilitation and landscaping
Concrete sleepers	Trades services (e.g. boiler makers and welders)
Pre-built and panelled turnouts	Professional services (e.g. environmental scientists, engineers, human resources)
Rails	Traffic management and security services
Fencing	Earthworks
Electrical components	
Fuels and oils	

Project supply opportunities during the construction phase may represent a substantial source of trade and an opportunity for local business growth. Businesses such as fuel stations, hotels, and supermarkets and convenience stores are likely to benefit from construction personnel's expenditure as they pass through the SIA study area.

ARTC has undertaken industry briefings in Toowoomba, and Ipswich, and attended a range of community events including local agricultural shows and Farm Fest events, to speak with businesses about Project opportunities. ARTC is currently undertaking a program of engagement with Chambers of Commerce and business representative groups. This will include presentations to members, sponsoring local business networking nights, obtaining information about business capacity and needs, and regular discussions with leaders in the organisations. These activities will support an increased understanding of local business capacity and capability, and build a 'business network' for delivering business capacity building programs and information about participation in the Project.

The potential for cooperation with other major projects which may be under construction (e.g. the Remondis Waste to Energy Facility, GWIZ or InterlinkSQ) to provide information to businesses about a range of projects and their supply requirements was also identified in consultation with DSSTI (as then known) and has been included as an action in Section 8.6.

For the operational period, services will be required for:

- Track maintenance
- Rehabilitation
- Maintenance of electrical and signalling infrastructure, level crossings and access tracks.

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 R: Economic impact assessment.

Inland Rail is subject to the *Australian Jobs Act 2013* 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.

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.

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.

### 7.5.6 Facilitation of economic development

The Inland Rail Project 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 Project is likely to support future industries associated within regional hubs such as the Bromelton SDA and the InterlinkSQ logistics hub at Wellcamp, with potential to support the establishment of large businesses which will be a source of long-term employment for SIA study area residents, and may catalyse further regional development with the growth of associated businesses within and connected to the regional hubs.

The Project will also improve access to and from regional markets, and is likely to catalyse development within these areas, particularly in relation to rail dependent industries and support industries associated with transport, freight handling, warehousing and logistics.

EIS Appendix R: Economic impact assessment includes an assessment of estimated community benefits relating to crash cost savings, cost savings from environmental externalities (such as air pollution, greenhouse gas emissions and other environmental disruptions) and road decongestion benefits. The assessment indicates the Project's community benefits represent an \$34.99 million (present value) over a 50-year analysis period.

## 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 (IFC 2013). This assessment has considered the spatial distribution (where they would be located in relation to the Project and nearby communities) and temporal distribution (the time period in which each project may have an effect on the social environment).

Variables which will influence the potential for cumulative social impacts include:

- The availability and distribution of construction labour at the time projects commence
- The timing for any coincidence in peak workforce demands
- Projects' plans for recruitment, training, housing and accommodation
- The likelihood that some projects' currently proposed schedules will change.

As such, a reliable quantitative assessment of cumulative social impacts is not possible. The following analysis should be considered as indicative rather than conclusive.

Temporal distribution is represented in Table 7-8, up until Project year 20, as known. This includes the potential cumulative impacts of construction of major projects in the Project region as identified at the time the EIS ToR were published, and the potential for cumulative impacts due to construction of rail projects in SEQ including:

- Inland Rail Border to Gowrie (B2G), expected to commence construction in 2021 and require a peak workforce of approximately 950 personnel
- Inland Rail K2ARB, expected to commence construction in 2023 and require approximately 100 personnel
- Cross River Rail (CRR), which commenced construction in late 2019 (CRR 2019) and is estimated to require an estimated average of 1,600 construction personnel and up to 2,200 construction personnel at peak (CRR Joint Venture 2011)

- Brisbane Metro, with detailed design and construction of infrastructure anticipated for 2019-2022 (Brisbane City Council 2019)
- Gold Coast Light Rail Stage 3A, expected to begin construction in 2021 (DTMR 2019).

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 .

The construction workforce requirements for several other proposed projects were also not available. Projects such as the redevelopment of the RAAF Base Amberley may require large construction workforces, however there is no information available to date regarding the schedule or construction workforce for this Project, so impacts associated with this proposed project have not been considered in detail with respect to cumulative workforce requirements. Smaller projects such as the GWIZ are not expected to have significant cumulative impacts on workforce availability,

**Table 7-8 Cumulative Project set**

Project	Construction timeframe	Peak workforce (construction)	Potential overlap in construction periods – by Project year						
			1	2	3	4	5	6-10	11-20
	<b>Years</b>								
Inland Rail NSW/QLD Border to Gowrie (B2G)	2021-2026	950	■	■	■	■	■		
Inland Rail H2C	2021-2026	410	■	■	■	■	■		
Inland Rail G2H	2021-2026	596	■	■	■	■	■		
Inland Rail C2K	2021-2026	620	■	■	■	■	■		
Inland Rail –Kagaru to Acacia Ridge and Bromelton (K2ARB)	2023-2025	100		■	■	■	■		
Bromelton SDA	2016-2031	Unknown	■	■	■	■	■		
RAAF Base Amberley future works	2016-2022	Unknown	■	■					
Ipswich Motorway Upgrade Rocklea to Darra (Stage 1 and remaining sections)	2016/17 to 2020-2021	Unknown	■						
Remondis Waste to Energy Facility	2021-2023	200	■	■	■				
GWIZ	2019-2024	13 - 14	■	■	■	■			
InterlinkSQ	2017-2037	Unknown	■	■	■	■	■		
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

The local area of influence for assessment of cumulative social impacts has been defined as including the potentially impacted communities near the disturbance footprint, on the basis that this is the area where the physical interface of multiple projects and the potential for noise, character or connectivity issues are most likely to have a material impact.

#### Connectivity

H2C will adjoin G2H in an area approximately 400 m north of Helidon Spa and 1.1 km north-west of Helidon. Both projects avoid impacts on roads within Helidon Spa and Helidon, however, works to Cattos Road (for G2H) and Airforce Road (for H2C) may result in traffic delays for people entering and leaving the two communities.

There is also potential for the coincidence of major works affecting roads (e.g. for C2K, G2H and the Ipswich Motorway Upgrade) to affect travel times and cause driver frustration in potentially impacted communities and the Project region. Incremental increases in traffic on Project region roads are also possible as the result of a combination of construction for Projects such as InterLinkSQ and RAAF Base Amberley future works. This is unquantifiable, but if it eventuates, will need to be considered in relation to driver safety and emergency services access.

If construction works for the Project and G2H coincide in the Helidon area, there is potential to disrupt access to the Helidon to Ravensbourne Trail mountain bike trail through the Lockyer National Park, where access to the Trail section during works along Airforce Road may be affected by construction of G2H, and access to the Trail section during works along Seventeen Mile Road may be affected by construction of the Project. Detailed design for both projects will include consideration of the maintenance of access to the Helidon to Ravensbourne Trail if it is expected to be affected.

The Remondis Waste to Energy Facility is planned for construction in 2021-2023 on a site located approximately 40 km north-east of the Project. Information on this Project's construction traffic routes is not available to provide any indications of potential cumulative impacts on connectivity.

Inland Rail projects' TMPs will outline detailed strategies to mitigate potential impacts on road safety, as discussed in EIS Chapter 23: Draft Outline Environmental Management Plan. 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.

#### Community safety and traffic safety

As noted in Section 7.2.5, residents may be concerned about the potential risks to community safety relating to non-local workers, including 'stranger danger' and traffic safety, with any cumulative demands for non-local labour likely to increase this concern. Project workforce management strategies which address this include enforcing a Code of Conduct containing requirements for positive behaviours and respect for local residents and businesses and ensuring that the Contractor has appropriate work conduct policies and procedures, implemented for all Inland Rail work sites.

There is also potential for cumulative traffic increases as the result of workers' commuter vehicles or heavy vehicles impacting on traffic safety. This has been considered in EIS Appendix U: Traffic Impact Assessment Technical Report and EIS Chapter 22: Cumulative impacts which notes that the G2H, C2K and RAAF Base Amberley Projects may have overlapping construction dates with the Project, however potential cumulative impacts are dependent on the timing and location of the works of multiple projects at that time. These projects may result in cumulative impacts on traffic volumes, congestion and potentially lead to delays on local road networks during the construction period.



As part of the Project traffic, transport and access impact assessment a range of mitigation and management measures have been proposed for construction and operation of the Project, including the preparation of a Traffic Management Plan for construction. To further mitigate potential cumulative impacts, the other assessable projects will also be required to implement similar mitigation measures.

Mitigation measures proposed for the Project relating to safety, intersection impacts, link road impacts, pavement impacts and road/rail interface impacts will further mitigate potential cumulative impacts as a result of identified projects (refer to EIS Appendix U: Traffic Impact Assessment Technical Report).

### **Amenity and character**

Assessment of cumulative impacts on air quality are provided in EIS Appendix K: Air quality technical report. The adjoining Inland Rail projects (G2H and C2K) were included in the operational air quality assessment, as these projects will have the same trains as the Project and have the potential to impact sensitive receptors. EIS Appendix K: Air quality technical report notes that there is potential for the construction of G2H, the Project and C2K to overlap, however dust impacts are likely to be localised to the site locations and will be managed in accordance with the draft Outline EMP so the residual significance of air quality impacts was predicted as low.

As outlined in EIS Chapter 22: Cumulative impacts, noise from construction activities being undertaken simultaneously on the adjoining G2H and C2K projects has the potential to increase noise levels at nearby sensitive receivers for the Project, however the residual significance was predicted to be low and not require further mitigation measures. The arrival and departure of Inland Rail trains on the G2H and C2K projects will occur further away from the sensitive receptors than the H2C alignment, so a cumulative increase in daily railway noise levels at sensitive receptors adjacent to the H2C alignment was not predicted.

With respect to landscape and visual amenity impacts, construction impacts associated with views of construction areas and increased construction traffic were identified as of low residual significance.

Notwithstanding, the occurrence of earthworks and roadworks associated with construction of the Project, G2H and C2K may affect the scenic character of the local roads and highways where these activities coincide.

EIS Appendix H: Landscape and Visual Impact Assessment Technical Report found that operational impacts associated with views of combined, successive and sequential views of adjoining projects were of medium residual significance. This aligns with community views that Inland Rail projects' operation will affect the Project region's scenic character through the placement and use of elevated structures in the landscape. Effects on community members would be differential, as some will find visual interest in Inland Rail structures or operations, some will feel disappointed or upset about the changes, and some may be unaffected either way. Over time, community members are likely to adapt to the landscape changes as they do for other changes to land use and scenic character.

### **Housing and accommodation**

The Project expects to draw the majority of its construction workforce from within the Project region and other nearby LGAs, with personnel returning home each night. With potential for a small number of 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, a contribution to cumulative demands on housing and accommodation is also possible.

As discussed in Section 5.5.2, the rental pools in potentially impacted communities are relatively small in each town and at January 2020, there were 131 rental dwellings advertised as vacant in the six relevant postcodes (refer Table 5-35). Whilst any demand from the Project and other Inland Rail projects is likely to be shared across the Project region including the larger centres of Toowoomba and Ipswich, any cumulative influxes of non-local personnel seeking rental accommodation could put pressure on rental housing stocks in local communities. For example, if each of the G2H, H2C and C2K projects required 20 dwellings each, and these dwellings were all accessed from within the potentially impacted communities, approximately 46 per cent of these communities' currently available stock would be required. This is an unlikely scenario but would have the potential to deplete rental housing stocks and increase rental costs, which could impact on low income households.

Management measures which address the Project's potential contribution to demands on rental housing are detailed in Section 8.4, and similar measures will be required of other Inland Rail projects, which is expected to minimise the Project's contribution to cumulative impacts.

### **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, site security (e.g. responding to incidents of theft from work sites), road safety policing, and potentially community protests against Inland Rail or other projects. 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.

As Project workers' 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 Toowoomba or Ipswich 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 a partnership with the Darling Downs and West Moreton PHN to strengthen local access to services delivered in the Project region. The Project will also consult with DCHDE to identify any existing service shortfalls and monitor any increases in service demands resulting from the Project, to enable cooperative solutions to address any strain on services resulting from the Project.

The Project will provide workforce ramp-up estimates and close cooperation to the QPS, QAS, QFES, DCHDE and Queensland Health to assist with their planning.

### **Employment and labour**

In combination, projects listed in Table 7-8 have the potential to provide significant employment and business opportunities for local residents during the construction phase. This includes significant construction employment opportunities related to the construction of Inland Rail projects and the RAAF Amberley Airbase. The GWIZ would have approximately 13 construction personnel and 36 operations personnel, so the potential cumulative impacts of this project are insignificant.

If multiple other projects as listed in Table 7-8 are constructed in the same time frame as the Project, there may 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. There is also potential for increased trade for businesses in towns such as Helidon and Gatton due to concurrent Inland Rail projects' workforce expenditure whilst they are in the Project region.

Transport, logistics and industrial hubs are not part of the Project, requiring private investment and separate approvals, however the Project is likely to catalyse industrial development by facilitating the development of intermodal freight facilities such as InterlinkSQ and may also catalyse development at the Gatton West Industrial Zone.

Collectively, the operation of Inland Rail projects, intermodal freight facilities and the GWIZ would contribute to long-term employment opportunities for the residents of potentially impacted communities. This is likely to be a significant positive driver for community wellbeing, as supported by access to a diverse range of long-term jobs and business opportunities in the Project region.

### **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 demands for labour are also relevant to other Queensland regions.

#### **Connectivity**

The coincidence of construction of projects listed in Table 7-8 would have cumulative impacts on traffic volumes and potentially lead to traffic delays during the construction period, throughout the Project region. Impacts would depend on the timing and location of the works of multiple projects at that time. As outlined in EIS Chapter 22: Cumulative impacts, a large range of mitigation measures relating to safety, intersection impacts, link road impacts, pavement impacts, and road/rail interface impacts have been proposed for construction and operation of the Project and are expected to suffice in order to mitigate for the Project's contribution to cumulative impacts on road traffic.

There will be opportunities to optimise the use and placement of spoil material between adjacent Inland Rail projects however excess spoil will be transported to other sites by road, with potential to increase traffic volumes on key routes. An accurate assessment of 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 T: Spoil management strategy and Appendix U: Traffic impact assessment technical report.

#### **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.

If Inland Rail's G2H, H2C and C2K projects were constructed simultaneously, and all workforce peaks coincided, a total of approximately 1,626 construction personnel would be required across the Toowoomba, Lockyer Valley, Ipswich and Scenic Rim LGAs. If the Inland Rail B2G project's labour force also peaked during the same period, an additional peak requirement for approximately 950 personnel would result, focussed within the Toowoomba and Goondiwindi LGAs. The construction workforce requirement for the K2ARB project is estimated at approximately 100 personnel, so 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 and Brisbane LGAs. In the context of SEQ's large construction and trades labour force, this is unlikely to cause a significant adverse impact on other industries' access to labour and would be a significant employment benefit in the regions in which the projects would be constructed.

There is also potential for multiple projects in the Project region (including InterLinkSQ, the Remondis Waste to Energy facility and RAAF Base Amberley future works) to coincide with Project construction. The Remondis facility is estimated to require up to 200 personnel at peak (between 2021-2023). Information about the timeframes for development and numbers of personnel required for the RAAF Base Amberley and InterLinkSQ was insufficient to estimate any effects on labour availability, and assessment of cumulative labour demands 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. If multiple additional projects as listed in Table 7-8 were constructed in the same time frame, there may be a significant draw on trades and construction labour in the Project region.

The ongoing development of the Bromelton SDA 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 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) may overlap with Inland Rail project construction phases. If the peak requirements for these three rail projects coincided, based on Cross River Rail's peak construction workforce estimate of 2,200 personnel, and an estimate of 2,600 construction personnel required for Brisbane Metro and 760 personnel required for Gold Coast Light Rail Stage 3A, a peak requirement for approximately 5,560 construction personnel could result. This appears unlikely given Cross River Rail and Brisbane Metro have commenced construction and would build to their workforce peaks earlier than Gold Coast Light Rail Stage 3A. If peak requirements for Inland Rail projects' construction all coincided with these projects' workforce peaks, up to approximately 8,200 personnel would be required. 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 personnel, affecting access to labour and 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.

The Project also has potential to catalyse the positive impacts of industrial development by attracting rail-dependent industry to locations such as Ebenezer and facilitating development of intermodal freight facilities such as the InterlinkSQ hub. 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 SIA study area.

The Project is part of the national Inland Rail works. The Inland Rail Business Case (ARTC. 2015) identifies an anticipated additional 16,000 jobs will be required Program-wide at the peak of construction, with an average of 800 jobs per annum over the 10-year construction period. An average of 700 additional jobs per annum, Program-wide, is anticipated over 100 years of operation. The 10-year delivery schedule would support economic activity in the affected regions and create regional jobs in Queensland, New South Wales and Victoria during both construction and operations.

### **Housing and accommodation**

Cumulative demands for short-term accommodation may be experienced in Ipswich and Lockyer Valley communities, and/or in adjacent LGAs. The Project's contribution to cumulative demands for temporary accommodation is expected to be small, however if the coincidence of several major projects' construction phases strained the capacity of the construction labour force in the Project region, this may lead to a requirement for large numbers of non-local personnel to stay locally. There are multiple uncertainties in relation to timing of these projects, so a quantitative assessment has not been attempted.

As noted in Section 5.5, rental housing pools in potentially impacted communities are small and there are few short-term accommodation options in the Lockyer Valley, with a wider range of short-term accommodation available in the nearby centres of Toowoomba and Ipswich. 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 impacts for tourism businesses. The Project's AMP will include measures to monitor the Project's potential demands for housing and short-term accommodation to enable corrective action if required to reduce Project demands on housing and accommodation.

### **Social infrastructure**

The Project's contribution to cumulative demands on health and emergency services relate primarily to the potential for an increase in the day-time population of the Project region during construction and the need for traffic management and oversized vehicle escorts. 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, DCHDE and Queensland Health in the Project region may be required. As noted in Section 7.4.3, 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.

#### **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 7-9. The significance criteria used to evaluate cumulative impacts are provided in Section 9.



**Table 7-9 Potential cumulative social impacts**

Project	Impact Area	Likelihood	Consequence	Significance	Mitigation measures	Residual Significance
G2H (construction)	There is potential for construction of G2H and the Project to result in temporary disruptions to access to the Helidon to Ravensbourne Trail	C	2	Medium (-)	Detailed design for both projects will include consideration of the maintenance of access to the Helidon to Ravensbourne Trail if it is expected to be affected	D2 (-) (Low)
	Works to Cattos Road (for G2H) and Airforce Road (for H2C) may result in traffic delays in this area	B	1	High (-)	TMPs for the two projects will consider potential cumulative impacts on traffic and coordinate traffic management accordingly	C1 (-) (Low)
C2K, G2H (construction)	Combined impacts of rail construction on amenity of surrounding rural landowners and the towns of Calvert and Helidon respectively	C	3	High (-)	Construction scheduling for these projects will consider the potential for e.g. cumulative noise and dust impacts on amenity	C2 (-) (Medium)
	Increased traffic volumes during construction and requirement for integrated management of road safety	B	2	High (-)	Implementation of Traffic Management Plans for each Inland Rail project	C2 (-) (Medium)
B2G, G2H, C2K, K2ARB, RAAF Amberley Base future works (construction)	Potential labour draw in the Project region affecting access by businesses, industries and households	C	2	Medium (-)	Inland Rail Skills Academy partnerships to identify training pathways and programs for local people	C1 (-) (Low)
	Project region businesses would benefit from Project and personnel expenditure of the combined Inland Rail projects	B	3	High (+)	Inland Rail's AIPP and Sustainable Procurement Strategy will maximise the involvement of businesses	A3 (+) (High)
	Increase in demands for policing and emergency services may affect service capacity	B	2	Medium (-)	Provide workforce ramp-up estimates and close cooperation to the QPS, QAS, QFES, DCHDE and Queensland Health to assist with their planning	C2 (-) (Medium)

Inland Rail Helidon to Calvert EIS – Appendix Q: Social Impact Assessment technical report

Project	Impact Area	Likelihood	Consequence	Significance	Mitigation measures	Residual Significance
	Potential to provide significant employment and business opportunities for local residents	B	3	High (+)	Require Contractor to document proposed goals and strategies for recruitment and training of personnel from the SIA study area and report on the outcomes of these strategies AIPP	B4 (+) (High)
	Transport of spoil may increase traffic volumes on key routes with potential to affect Levels of Service or traffic safety	C	Unknown	Unknown	Spoil management strategy and TMP	Unknown
Any/all projects where workforce requirements would coincide (construction)	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 (-)	TMPs for Inland Rail projects will consider potential cumulative impacts on traffic and coordinate traffic management accordingly	C2 (-)(Medium)
	Labour draw leading to requirement for non-local personnel to stay locally, with consequent cumulative impacts on housing and social infrastructure (particularly health and emergency services)	C	3	High (-)	Inland Rail Skills Academy Consultation with Councils and business chambers to monitor labour draw and enable corrective action e.g. refinement of recruitment strategies	C2 (-)(Medium)
	Potential for cumulative demands on housing and/or short-term accommodation, but with minimal Project contributions to impacts expected	C	3	High (-)	AMP required of contractors for all Inland Rail projects	C2 (-)(Medium)
	Community concern relating to increased numbers of non-local workers, including 'stranger danger' and traffic safety	C	2	Medium (-)	Local recruitment, Workforce Code of Conduct required of all Inland Rail project contractors	C1 (-) (Low)
	Increased demands on health and emergency services	C	3	Medium (-)	Cooperation with Queensland Health, QPS, QAS and QFES to advice on workforce ramp-up and construction activities	C2 (-) (Medium)

Inland Rail Helidon to Calvert EIS – Appendix Q: Social Impact Assessment technical report

Project	Impact Area	Likelihood	Consequence	Significance	Mitigation measures	Residual Significance
	Potential for stresses associated with construction projects to increase local demands for support services	C	3	Medium (-)	Mental health partnership with PHNs (refer to Section 7.4.8)	C2 (-) (Medium)
	Expansion in the construction sector would support additional flow-on demand through the construction industry supply chain	B	3	High (+)	Not required – local business participation strategies outlined in Section 8.6	B3 (+) (High)
Bromelton SDA and GWIZ (operation)	Facilitation of development and future job growth	A	3	High (+)	Not required	A3 (+) (High)
	Incremental increases in traffic on SIA study area roads	B	1	Medium (-)	Not required	B1 (-) (Medium)
Any/all projects (operation)	The operation of Inland Rail projects and intermodal freight facilities would contribute to long-term employment opportunities for the residents of potentially impacted communities	B	4	High (+)	Not required	B4 (+) (High)

## 8 Social Impact Management Plan

This section outlines the objectives, outcomes and performance measures for mitigation of social impacts, and the actions that ARTC will undertake and/or require its Contractor to undertake to avoid or reduce adverse impacts. Measures intended to enhance Project benefits and opportunities are also provided, along with a framework to monitor SIMP implementation and effectiveness.

### 8.1 Introduction

This section provides the framework for mitigation of social impacts and enhancement of Project benefits, and aims to:

- Incorporate stakeholder inputs on mitigation and enhancement strategies
- Provide guidance for the mitigation of negative impacts on stakeholders and communities
- Support adaptive management of social impacts, by enabling communication between stakeholders and the Project as the design process and construction progress
- 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 8.3)
  - Housing and Accommodation (Section 8.4)
  - Health and Community Wellbeing (Section 8.5)
  - Local Business and Industry (Section 8.6).

Actions plans include:

- An overview of the key impacts and opportunities
- Objective 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 stages.

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.

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.

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 through sponsorships and donations.

As noted in Section 4.1, the delivery method for the Project will involve ARTC contracting with a suitably experienced construction management company (the Contractor). The Contractor's role is defined in EIS Chapter 23: Outline Environmental Management Plan 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 many of the SIMP measures. Details of respective responsibilities for ARTC and the Contractor will be agreed as part of the tendering and contracting process. ARTC will have dedicated personnel to coordinate and monitor SIMP implementation.

Further detail pertaining to each Project phase is provided below.

#### Detailed design and construction planning

The Project is currently in the design phase. If approved, it will undergo a detailed design and construction planning phase. Changes to the 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 duration 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, SIMP measures will be revised to address any 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 measures and ARTC's social performance program delivery including:

- Partnerships and projects to support mitigation and enhancement of benefits
- The respective responsibilities of the Project 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. The Constructing Authority will be responsible for working with landowners throughout the land acquisition process.

Measures provided for the detailed design phase address land acquisition impacts, but also include other 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 include land clearing and establishment of laydown areas and access tracks, which may result in noise and change the character of the land within the disturbance footprint. 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 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 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 include changes to the road network, the potential for railway noise to affect the amenity of properties near the Project, changes to scenic character 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 and/or the Contractor's established management frameworks for rail operation, including rail noise management, safety management, workforce development and stakeholder engagement. This will be informed by the monitoring undertaken during the construction phase, which includes stakeholder engagement in monitoring impacts and the effectiveness of mitigation measures.

The SIMP to be developed for Project operations will include:

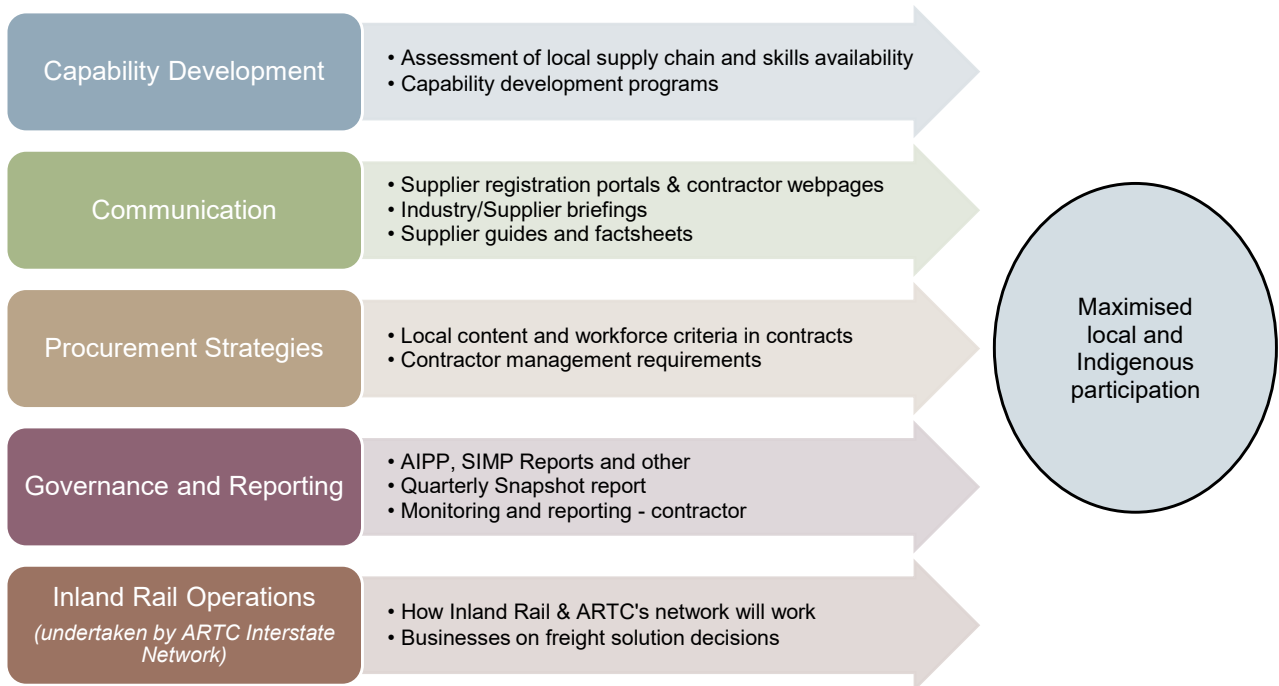
- Community and stakeholder engagement strategies, including ensuring that landowners and residents near the Project have access to information about Project impacts and mitigation measures, including noise, air quality and flooding impact management, and ensure a timely resolution to complaints
- Monitoring the effectiveness of noise mitigation measures for schools and other community facilities as relevant

- The Complaints Handling Management Procedure
- Implementation of rail safety promotions, including development of a road/rail safety education program with a clear focus on interactions between the rail corridor, public and private roads, and pedestrian and cycle links
- Strategies for orientation of QPS, QAS and QFES personnel to Project infrastructure and provision of information on train schedules which would help first responders to navigate access arrangements
- Collaboration with the Darling Downs and West Moreton PHN and/or Queensland Health to gauge the need for support for mental health programs
- Training and development initiatives which equip local people for operational roles
- Provision of information about Project supply opportunities on the Inland Rail portal
- Engagement with DTMR, LVRC and ICC to monitor the effectiveness of rail-road interfaces and changes to the road network.

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 Office of Coordinator-General.

### 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 policies/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 (Lockyer Valley and Ipswich 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.

Inland Rail initiatives to be implemented for the Project include:

- Australian Industry Participation Plan
- Sustainable Procurement Policy
- Indigenous Participation Plan
- Inland Rail Skills Academy
- Inland Rail Community Sponsorships and Donations Program.

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 H2C SIA study area. This includes a focus on the Lockyer Valley LGA, Ipswich LGA, 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 Lockyer Valley and Ipswich 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 Lockyer Valley and Ipswich 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 University of Southern Queensland (USQ) is accessible to residents in the project region, and ARTC has agreed with LVRC and ICC that Inland Rail Skills Academy training	8.3

Themes	Outcomes	Link to SIA findings/SIMP	Section
		<p>programs will identify cross-over skills with RSIS priorities in each LGA, and work to develop training programs to build those skills.</p> <p>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, DSDSATSIP and CSQ to target training and development programs to local Indigenous people.</p>	
Housing and Accommodation	Inland Rail accommodation solutions minimise negative impacts to local housing markets	In drawing the majority of its workforce from the Lockyer Valley LGA, Ipswich LGA 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 ICC e.g. avoiding use of caravan parks, avoiding creation of new or inappropriately sized residential lots and LVRC e.g., managing any demands for short-term accommodation to avoid impacts on the local tourism trade.	8.4
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	<p>The SIA process identified strong interest in Project supply chain opportunities.</p> <p>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 DSDILGP and will deliver early activities post approval. Additionally, ARTC will require its contractor to deliver business capability development strategies in the Lockyer Valley and Ipswich LGAs.</p>	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
- Environmental management measures provided the draft Outline EMP in EIS Chapter 23: Draft Outline Environmental Management Plan
- 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 to mitigation of Project impacts have included:

- Locating the Project alignment within the existing protected corridor or road reserves where possible, to reduce land acquisitions, severance and impacts on property use and management
- Property-specific measures which respond to landowners' inputs regarding access to and within properties, and avoidance of productive land and farm infrastructure where possible
- Locating laydown areas in sparsely populated areas where possible, to reduce impacts in town centres
- Designing road-rail interfaces to maintain connectivity and safe operation of the road network.

ARTC design responses have reduced but not removed the potential for impacts due to land acquisition and placement of infrastructure. ARTC has committed to continued engagement with directly affected and nearby landowners to address their specific concerns.

## Environmental impacts

Measures outlined in the draft Outline EMP (refer EIS Chapter 23: Draft Outline Environmental Management Plan) and detailed in the relevant technical reports are designed to avoid or minimise 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 EMP 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

ARTC Inland Rail's social performance program is developing in response to the findings of SIAs undertaken for Inland Rail projects, stakeholder feedback, and corporate policies being established to support Inland Rail's delivery. ARTC has set clear social performance requirements for its contractors to support its social performance strategies.

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. Generally, ARTC's social performance strategies are expected to increase the value of Project benefits to local communities.

## Measures identified through SIA

Additional 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 minimising 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 and vulnerabilities within local communities
- The duration of impacts
- Project responses to issues raised by stakeholders
- ARTC commitments and social performance strategies
- Measures outlined in the EIS and SIA.

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 Responses to stakeholder inputs**

Stakeholders made a range of suggestions and recommendations regarding actions that ARTC could consider to mitigate adverse Project impacts or maximise Project benefits.

Stakeholder inputs are detailed in Table 8-2, which references how suggestions and recommendations have been addressed.



**Table 8-2 Key issues and ARTC responses**

Impact area	Suggested mitigation/enhancements	How addressed
Indigenous values	<ul style="list-style-type: none"> <li>■ Involvement of Traditional Owners in cultural awareness training for contractors</li> </ul>	<ul style="list-style-type: none"> <li>■ A CHMP has been developed and signed with the Yuggera Ugarapul People</li> <li>■ Cultural awareness training for Project personnel will be developed and implemented in cooperation with Traditional Owners</li> </ul>
	<ul style="list-style-type: none"> <li>■ Keep consulting with Traditional Owners to maximise opportunities for Indigenous people to benefit from the Project involvement</li> </ul>	<ul style="list-style-type: none"> <li>■ ARTC’s Indigenous Participation Advisor is working with Traditional Owner groups and local communities to support their consideration of employment and business opportunities</li> </ul>
	<ul style="list-style-type: none"> <li>■ Facilitate access to EIS for Traditional Owner groups</li> </ul>	<ul style="list-style-type: none"> <li>■ ARTC will ensure advice on access to the EIS is provided to Traditional Owner groups, invite them to discuss EIS findings and facilitate assistance with development of a submission on the EIS if requested</li> </ul>
Agricultural properties	<ul style="list-style-type: none"> <li>■ Strong view that the alignment should not go through the Lockyer Valley</li> <li>■ Change the alignment to and minimise agricultural land severance</li> </ul>	<ul style="list-style-type: none"> <li>■ Where possible the Project has been located within the existing protected rail and road corridors to limit severance of agricultural properties</li> <li>■ ARTC has consulted with landowners about their requirements in relation to water access, road usage, private crossing requirements, hydrology, existing infrastructure and land use. This information was considered in the design process where possible to minimise impacts</li> <li>■ ARTC is working with landowners to ensure that a satisfactory level of access between adjoining properties is maintained, and to identify actions which will minimise or offset changes to farm management, property access or water access which affect their properties</li> </ul>
Property values	<ul style="list-style-type: none"> <li>■ Compensation for any loss of property values</li> <li>■ Early acquisitions requested</li> </ul>	<ul style="list-style-type: none"> <li>■ ARTC is unable compensate for any loss (perceived or actual) of property value</li> <li>■ The Project will employ a suite of environmental management measures as outlined in EIS Chapter 23: Draft Outline Environmental Management Plan to reduce impacts on amenity and therefore the potential for impacts on property values</li> <li>■ Land acquisition agreements developed by the Constructing Authority will address compensation for direct impacts on properties</li> <li>■ ARTC will advise the Constructing Authority of landowners’ wishes in relation to acquisitions</li> <li>■ DTMR has undertaken thirteen acquisitions during the EIS process</li> <li>■ Support for mitigation of impacts on affected landowners is addressed in Section 8.2</li> </ul>
Amenity	<ul style="list-style-type: none"> <li>■ Implement vibration, noise and dust control mitigations</li> <li>■ Assess potential changes in amenity</li> </ul>	<ul style="list-style-type: none"> <li>■ The Project has been located within the existing protected rail corridors where possible to minimise potential land use conflicts and fragmentation</li> <li>■ The Project EIS includes detailed strategies addressing mitigation of impacts on air quality and the noise environment and exposure to vibration (refer</li> </ul>

Impact area	Suggested mitigation/enhancements	How addressed
	<ul style="list-style-type: none"> <li>■ Project alignment to avoid impacts as much as practicable</li> </ul>	<p>EIS Chapter 23: Draft Outline Environmental Management Plan)</p> <ul style="list-style-type: none"> <li>■ The Project will manage environmental impacts in accordance with its approval conditions in order to minimise impacts on amenity</li> <li>■ The Project will work with stakeholders to minimise impacts</li> <li>■ Measures to support mitigation of impacts on amenity are provided in Section 8.2</li> </ul>
Character	<ul style="list-style-type: none"> <li>■ Avoid impacts on the cultural heritage and character values of Grandchester, Forest Hill and Gatton</li> <li>■ Address visual impacts through design and aesthetic treatments</li> <li>■ Construction planning will consider scenic values which support amenity and tourism</li> <li>■ Provide planting to cuts and embankments to reduce their visual impacts</li> <li>■ Ongoing engagement with ICC and LVRC regarding place making, community facility investments and economic development</li> </ul>	<ul style="list-style-type: none"> <li>■ The Project has been confined to the rail corridor where it passes through local towns to avoid direct impacts on heritage places such as hotels, rail stations, halls and war memorials in local towns</li> <li>■ EIS Appendix H: Landscape and visual impact assessment technical report and EIS Chapter 23: Draft Outline Environmental Management Plan provide detailed mitigation measures for impacts on visual amenity and landscape values</li> <li>■ Plantings to cuts and embankments will be considered as part of the Project’s landscaping strategy in the detailed design phase. Safety design standards and the sustainability of planting will need to be considered</li> <li>■ Initiatives to support the amenity and liveability of local towns and rural localities will be identified through engagement with local Councils and communities during the detailed design phase and implemented during construction</li> <li>■ ARTC has committed to ongoing engagement with ICC and LVRC to develop detailed strategies to address social impacts</li> </ul>
Employment opportunities	<ul style="list-style-type: none"> <li>■ Make sure local people can access Project employment</li> <li>■ Workforce strategy to include job opportunities for local residents</li> <li>■ Potential for local employment for maintenance and operations of potential sidings and planned future intermodal developments</li> </ul>	<ul style="list-style-type: none"> <li>■ The construction contract will include specification of the contractor’s goals for employment of people from within the Project region</li> <li>■ ARTC is working with Government stakeholders, CSQ and education and training providers to identify education and training pathways for local residents to equip them for jobs in Project construction and operations</li> <li>■ ARTC will provide a clear and efficient process for people to seek information about employment opportunities and register their interest in Inland Rail</li> <li>■ ARTC has established the Inland Rail Skills Academy to support workforce training and development for the construction and operational phases</li> <li>■ ARTC is working with the two Councils’ RSIS coordinators to align skills training programs with community and local industry priorities</li> <li>■ Decisions regarding the location of maintenance hubs are not within the scope of the Project</li> </ul>

Impact area	Suggested mitigation/enhancements	How addressed
Local business	<ul style="list-style-type: none"> <li>■ Ensure businesses who would be affected by construction works are kept updated</li> <li>■ Ensure that local businesses are supported to participate in the supply chain</li> <li>■ Support the capacity of local contractors and suppliers to service the Project</li> </ul>	<ul style="list-style-type: none"> <li>■ The Project will inform and consult business stakeholders about Project impacts as the EIS phase and detailed design and construction planning process progress</li> <li>■ ARTC will implement its AIP 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</li> <li>■ ARTC will implement its Sustainable Procurement Policy to ensure Project supply opportunities are available to local businesses</li> <li>■ ARTC is working with stakeholders to identify local and regional businesses with potential capacity to supply the Project and to develop capacity building initiatives</li> <li>■ The Project will maintain communication with businesses and business organisations to update them on Project timeframes, supply requirements and capacity building programs</li> <li>■ Business capacity building programs will be offered through the Inland Rail Skills Academy</li> </ul>
Indigenous training, employment and business participation	<ul style="list-style-type: none"> <li>■ Ensure local Indigenous people have access to training and employment opportunities, including young people and mature jobseekers</li> <li>■ Employ an Indigenous mentor for construction personnel</li> <li>■ Require contractors to employ Yuggera Ugarapul People in Project construction as part of contracts</li> <li>■ Opportunity for Traditional Owners to talk with Government agencies that will be involved in Inland Rail projects</li> </ul>	<ul style="list-style-type: none"> <li>■ ARTC is in regular consultation with Traditional Owners. This will continue during the detailed design phase, with a particular focus on business and employment opportunities.</li> <li>■ ARTC is working with Traditional Owner groups to support community members' readiness for employment (refer SIA Section 8.3)</li> <li>■ ARTC will require the Contractor to specify and meet Indigenous training and employment goals</li> <li>■ The Project will continue to engage with Traditional Owner groups to provide access to information about business and skills requirements</li> <li>■ Project personnel will include Indigenous mentors to support Indigenous workers</li> <li>■ Indigenous training and employment are addressed in the SIA at Section 8.3</li> <li>■ ARTC has coordinated a meeting between Yuggera Ugarapul People and DSDSATSIP and will work with both organisations to address shared goals</li> </ul>
Community wellbeing and safety	<ul style="list-style-type: none"> <li>■ Ensure residents are supported through the process of changes relating to Inland Rail</li> <li>■ Ensure community members have access to open and transparent consultation to reduce uncertainties causing stress</li> </ul>	<ul style="list-style-type: none"> <li>■ ARTC is undertaking a comprehensive engagement program as part of the EIS process (refer Appendix C: Consultation report)</li> <li>■ ARTC has initiated a mental health partnership to assist community members who are feeling stress or anxiety related to the Project</li> </ul>

Impact area	Suggested mitigation/enhancements	How addressed
	<ul style="list-style-type: none"> <li>■ Invest in long-term community amenity, improving community connectivity and safety</li> <li>■ Need to ensure that people with English as second language are considered in road safety campaigns</li> </ul>	<ul style="list-style-type: none"> <li>■ 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 the Office of the Coordinator-General following the conclusion of construction.</li> <li>■ The Project will maintain continued engagement with landowners throughout the detailed design, construction and operational phases.</li> <li>■ ARTC will maintain engagement with Queensland Education, LVRC, ICC, DCHDE and Queensland Health with respect to impacts on social infrastructure</li> <li>■ ARTC’s Community Donations and Sponsorship program accepts applications for community facility upgrades</li> <li>■ Communication strategies about road and pedestrian safety will include a focus on people with English as a second language</li> </ul>
Health and emergency services	<ul style="list-style-type: none"> <li>■ Early and regular engagement with QFES, QPS, QAS, SES and disaster management coordinators to develop cooperative management measures</li> <li>■ Workforce health care needs be planned for in advance in consultation with Queensland Health to inform health service planning</li> <li>■ Cooperate with Police and emergency services to reduce the potential for emergency vehicle access delays</li> </ul>	<ul style="list-style-type: none"> <li>■ The Project will consult and cooperate with emergency services (refer Section 8.5)</li> <li>■ ARTC is working with QPS, QAS, QFES and local disaster management coordinators as part of Hazard and Risk management planning</li> <li>■ During the detailed design phase, ARTC will work with QAS to confirm and implement alternative vehicle access points during construction and operation</li> <li>■ Emergency access has been addressed during the Project reference design process</li> <li>■ The Project will consult with Queensland Health, QPS, QAS and QFES regarding the workforce ramp-up and any specific anticipated demands on hospitals</li> </ul>
Housing and accommodation	<ul style="list-style-type: none"> <li>■ Accommodation plan required for construction workforce to manage potential cumulative impacts on local short-term accommodation</li> </ul>	<ul style="list-style-type: none"> <li>■ The Contractor will provide an AMP for ARTC’s approval (refer Section 8.4)</li> <li>■ ARTC will monitor the delivery and effectiveness of the AMP and require the Contractor to undertake corrective action if strains on housing or accommodation are identified</li> </ul>
Public transport	<ul style="list-style-type: none"> <li>■ Include provision for passenger rail inclusion as part of the Project design</li> </ul>	<ul style="list-style-type: none"> <li>■ The rail corridor will have space for any future provision of passenger rail transport by the Queensland Government.</li> </ul>

**8.1.5 Engagement with Councils**

The Project has consulted extensively with ICC and LVRC 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 and ensuring that rail access is not precluded for proposed adjoining third-party industrial hubs
- Design responses to specific areas of concern ailed 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 SQW programs
- Housing and accommodation sub-plan (refer Section 8.4) which incorporates LVRC 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 LVRC during the draft EIS public display phase and following review of Council submissions to the draft EIS as detailed in Section 8.2.10. This will include meeting with the LVRC and ICC to:

- Review the EIS findings
- Agree on the program for engagement during the detailed design phase, including issues to be discussed and the program for discussion (e.g. water use, waste management, road network management and social impact management)
- Progress discussions with LVRC with respect to:
  - Gatton, i.e. measures to support pedestrian connectivity within the town centre, protect and enhance the amenity of residents, businesses and community facilities, which may include investment in community facilities and/or parks, and offset off the loss of Apex Park
  - Forest Hill i.e. support for a local area planning process to identify challenges to the sustainability of businesses and the amenity of community facilities, measures to support town centre businesses, and measures to enhance the amenity of community facilities during the construction process

- Progress discussions with ICC with respect to Grandchester, including measures to protect the town’s scenic character during construction, enhancements to community facilities, and offset for severance of the School Park Reserve
- Consult with residents, landowners and business adjoining locations where concept rail noise barriers are being considered to seek input/feedback on the design of any final noise barriers
- In finalising plans for landscape design, consult with LVRC, ICC and residents and business owners in Gatton, Forest Hill and Grandchester to seek and consider their feedback

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 linked to planning priorities**

Plan/Policy	Link with mitigation measures	Section
South East Queensland Regional Plan (ShapingSEQ)	■ 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
	■ Measures to maximise local employment and local business participation will support ShapingSEQ goals such as ‘grow’, ‘prosper’ and ‘sustain’ in the Project region	8.3, 8.6
Ipswich and West Moreton RDA Plan	<ul style="list-style-type: none"> <li>■ Measures to maximise local employment and local business participation provide support for diversifying local economies</li> <li>■ Measures to mitigate impacts on tourism as a highly valued industry are provided</li> </ul>	8.3, 8.6
Advance Ipswich	■ Measures to involve local businesses in Project supply will support the growth of industry and business activities	8.5
Lockyer – Our Valley Our Vision	<ul style="list-style-type: none"> <li>■ Provision of training, development and employment opportunities for the LGA’s residents will support sustainable economic development</li> <li>■ Inland Rail Skills Academy initiatives will support opportunities for lifelong learning and access to specialised training</li> <li>■ Measures to support local employment in construction and business supply opportunities will support livelihoods</li> </ul>	8.3, 8.6
Grantham Reconstruction Area Development Scheme	■ SIMP strategies recognise the vulnerability of Grantham residents to environmental and social impacts	8.2
Lockyer Valley Economic Development Plan 2018 – 2023	■ Measures to maximise local employment and local business participation provide support for diversifying local economies	8.3, 8.5
Employment and training programs	<ul style="list-style-type: none"> <li>■ Inland Rail is cooperating with RSIS officers in each Council to identify opportunities for cooperation in skills development</li> <li>■ The Inland Rail Skills Academy is cooperating with DESBT and DITRDC to align training and development initiatives with Government policies</li> </ul>	8.3



## 8.2 Community and stakeholder engagement

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 connectivity. ARTC will require a focus on residents' and businesses' 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.

Impacts prior to the Project's approval have included anxiety and stress about the potential for the Project to affect local amenity or quality of life as the result of property acquisition, noise and/or visual amenity 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:

- Changes to land use in the disturbance footprint, with potential to disrupt residential, business or agricultural uses, by involving stakeholders in the development and refinement of management measures addressing their properties
- Disruptions to the use, amenity or access of private properties during construction, by providing guidance for engagement with directly affected landowners and nearby residents regarding environmental changes during the construction phase
- Changes to the road network, with potential to affect how community members, services and business staff move around the Project region, by engaging key stakeholders in detailed design of traffic solutions
- 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
- An outline of the CRG/s to be established during the detailed design phase
- The complaints management handling procedure

- 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
- 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 landowners, Traditional Owners, communities, Councils, businesses, government departments 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	<ul style="list-style-type: none"> <li>■ A majority of landowners are satisfied with the management of Project impacts on their properties, as indicated by their feedback to the Project</li> <li>■ Number of complaints about Project impacts</li> </ul>
	Cooperative and respectful relationships exist between ARTC, the Principal Contractor, construction personnel and community members	<ul style="list-style-type: none"> <li>■ CRG feedback confirms ARTC has engendered positive relationships</li> </ul>
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	<ul style="list-style-type: none"> <li>■ Number and outcome measures (to be determined with partners) for community partnerships and programs in potentially impacted communities</li> </ul>
	Stakeholder issues and grievances are identified, evaluated, addressed and recorded	<ul style="list-style-type: none"> <li>■ ARTC responds to complaints from community members as per the ARTC Complaints Management System</li> <li>■ Complaints and their resolution are recorded and reported as part of SIMP reports</li> </ul>
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	<ul style="list-style-type: none"> <li>■ Mitigation measures are refined where necessary in response to stakeholder feedback</li> <li>■ CRG feedback confirms satisfactory access to timely information about the Project and management measures</li> <li>■ Landowners who need to move from within the Project footprint have access to support, if required</li> <li>■ Mental health partnership is maintained during the construction phase</li> </ul>

### 8.2.2 Stakeholders

The key stakeholders addressed by the engagement measures outlined in Table 8-7 include:

- Landowners in and near the disturbance footprint
- Residents, businesses and community and business organisations in potentially impacted communities
- Traditional owners and other Indigenous community members
- LVRC and ICC
- Local businesses, including farming and grazing businesses
- High schools and training providers

Government, agencies including Queensland Health, QPS, QAS, QFES, Department of Education, DESBT, DSDILGP, DSDSATSIP, DCHDE, and DITRDC. Key stakeholders that are also addressed as part of other SIMP action plans include:

- Education and training providers (Section 8.3)
- Short-term accommodation providers (Section 8.4)
- Community organisations providing community support or outreach services and the managers of potentially impacted community facilities (Section 7.4.1)
- Queensland Health, QPS, QAS, QFES and Department of Education (Section 8.5)
- DESBT and DSDILGP (Sections 8.3 and 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 which will support management of 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
<b>Use of private property</b>	<ul style="list-style-type: none"> <li>■ 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.</li> <li>■ ARTC will continue consultation during the EIS display period when landholders have had access to the EIS.</li> <li>■ 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.</li> </ul>	Current and ongoing

Impact/benefit	Detail	Status
	<ul style="list-style-type: none"> <li>■ The Constructing Authority will not begin to acquire land until the corridor is confirmed, the Project is approved, and the gazetted corridor is finalised.</li> <li>■ During the construction phase, the contractor will assume responsibility for relationships with landholders.</li> </ul>	Commencement date to be determined by the Constructing Authority
<b>Effects on cultural landscapes</b>	<ul style="list-style-type: none"> <li>■ Cultural Heritage Management Plans for the Project have been developed between ARTC and the Yuggera Ugarapul People and approved under the Aboriginal Cultural Heritage Act 2003 (ACH Act) approved by the Chief Executive of DATSIP on 5 June 2018.</li> </ul>	Complete
<b>Impacts on local amenity</b>	<ul style="list-style-type: none"> <li>■ Engagement with LVRC and ICC, issues including road re-alignments, crossing design, road use management, waste management, utilities and social impacts and benefits. This has included working with the Council to finalise related work details that will form part of the construction contract</li> </ul>	Commenced during EIS phase and continuing
	<ul style="list-style-type: none"> <li>■ Partnership with LVRC in regard to Gatton and Forest Hill, and with ICC in respect to Grandchester to                             <ul style="list-style-type: none"> <li>– 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</li> <li>– Identify and implement modifications to Council-owned community facilities to reduce the impacts of noise and access changes</li> <li>– Plan for offsets for the loss of Council parkland</li> <li>– Facilitate the provision of modifications or upgrades for other community facilities affected by rail noise or changes to connectivity</li> <li>– Provide support for local facility upgrades e.g. improved access to and quality of parks and community facilities</li> </ul> </li> </ul>	Consultation planned for commencement in Q4 2020, with additional work to be undertaken once the contractor is on board
	<ul style="list-style-type: none"> <li>■ Council participation in tracking SIMP outcomes and developing adaptive management measures to address any emerging or changing needs.</li> </ul>	Commencing during construction
<b>Connectivity</b>	<ul style="list-style-type: none"> <li>■ Agreement with Councils that they have the right to approve road use management plans</li> </ul>	Current/confirmed
<b>Training and development opportunities</b>	<ul style="list-style-type: none"> <li>■ As part of Inland Rail Skills Academy partnerships, a Memorandum of Understanding (MOU) with CSQ, to:                             <ul style="list-style-type: none"> <li>– Provide information and advice on skills shortages to ARTC</li> <li>– Work with ARTC to broker and enable training responses to address identified shortages</li> <li>– Provide targeted construction skills training to Indigenous people, in cooperation with major contractors</li> <li>– Support ARTC and potential contractors to develop and deliver targeted skills development in ICC and LVRC in line with SIMP commitments and Project needs</li> <li>– Work with ARTC to deliver CSQ's 'Try a Trade' program to be initiated post approval</li> </ul> </li> </ul>	Current

Impact/benefit	Detail	Status
	<ul style="list-style-type: none"> <li>■ Inland Rail Skills Academy partnerships to enable:                             <ul style="list-style-type: none"> <li>– 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</li> <li>– 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</li> <li>– 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</li> <li>– 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 DSDILGP and DESBT for delivery post approval</li> <li>– 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</li> <li>– Training programs focused on developing skills in rail operation and working in a rail corridor</li> </ul> </li> </ul>	<p>Initiatives agreed as noted, to be commenced post approval</p> <p>Further initiatives to be identified during detailed design phase</p>
	<ul style="list-style-type: none"> <li>■ Engagement with DSDSATSIP and CSQ to identify specific training programs for Indigenous people, to be implemented as part of the Inland Rail Skills Academy</li> </ul>	<p>Current engagement</p>
	<ul style="list-style-type: none"> <li>■ SQW partnership with LVRC to provide construction skills training as part of upgrading a community facility</li> </ul>	<p>Initiatives agreed, DESBT funding sought, engagement to be renewed during approval process</p>
	<ul style="list-style-type: none"> <li>■ SQW partnership with ICC to implement a 'working with rail' skills program for Indigenous people</li> </ul>	<p>Initiatives agreed, DESBT funding sought, engagement to be renewed during approval process</p>
	<ul style="list-style-type: none"> <li>■ Opportunities for alignment with the ICC-Jobs Queensland partnership and Council economic development plans</li> </ul>	<p>To be explored in detailed design phase</p>
	<ul style="list-style-type: none"> <li>■ 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</li> </ul>	<p>Discussions ongoing</p>
	<ul style="list-style-type: none"> <li>■ Potential for a partnership with QR to access experienced rail operators and maintenance staff as trainers in the Project region</li> </ul>	<p>To be explored post approval</p>
<p><b>Health and safety</b></p>	<ul style="list-style-type: none"> <li>■ 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</li> </ul>	<p>Delivery commenced in 2019 and is ongoing</p>
	<ul style="list-style-type: none"> <li>■ Lifeline supported to deliver Lifeline's Community Connections program in the Project region to support community cohesion and resilience (delivered through PHN partnership)</li> </ul>	<p>Delivery commenced in 2019 and is ongoing</p>
	<ul style="list-style-type: none"> <li>■ Partnership with emergency services to build skills and cooperation in emergency responses</li> </ul>	<p>To be commenced post approval</p>

Impact/benefit	Detail	Status
	<ul style="list-style-type: none"> <li>Potential for additional services to be included within the PHN partnership agreements</li> </ul>	To be explored in detailed design phase
	<ul style="list-style-type: none"> <li>Partnership with 'Mates in Construction' focused on supporting mental health outcomes of construction workers on the Project</li> </ul>	Discussions in progress
<b>Local procurement</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Engagement with DSDILGP 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</li> <li>Working with DITRDC to align Project initiatives with DITRDC's regional development initiatives</li> <li>Working with the two Councils' RSIS coordinators to align skills training programs with RSIS priorities</li> <li>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.</li> </ul>	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 (see 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 8.2.7.

**Table 8-6 Engagement responsibilities**

Phase	Engagement mechanism	Responsibility
<b>Remainder of the EIS phase</b>	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	
	Meet with Councils to discuss proposed management measures, including the scope of the Community Wellbeing Plan and AMP, and any further measures to be included	
<b>Detailed design phase</b>	Write to directly affected landholders when the Constructing Authority is appointed and seek landholder consent for ARTC to advise Constructing Authority of landholders' wishes identified in engagement to date	Constructing Authority
	Undertake engagement with directly affected landholders regarding land acquisition process and compensation arrangements	



Phase	Engagement mechanism	Responsibility
	Engage with Councils, Government agencies and other stakeholders identified in Section 8.2 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
	Provide and implement a Communication and Stakeholder Engagement Management Plan (CSEMP) that: <ul style="list-style-type: none"> <li>■ Demonstrates the ability to develop and maintain a proactive, collaborative and effective working relationship with the community, stakeholders and ARTC</li> <li>■ Complies with ARTC policies and procedures</li> <li>■ Includes a communication control plan for key proposed construction sites along the alignment</li> <li>■ Details business engagement mechanisms</li> </ul> Describes the process for identifying and establish community initiatives, partnerships and legacy proposals	Contractor
	Establish and operate the CRG/s for operation throughout the pre-construction and construction phase	Contractor with ARTC
<b>Pre-construction and construction</b>	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
	Implement Inland Rail Skills Academy partnerships	
	Provision of regular updates about the progress and status of the Project through the Inland Rail website	
	Free call telephone line	
	Road/rail safety campaigns addressing the operations phase	
	Reply-paid address for written correspondence from community members	
	Maintain the Project's webpage, including feedback mechanisms and an enquiry facility.	
	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	
	Establish and implement communication and information strategies about the construction program and activities including: <ul style="list-style-type: none"> <li>■ Notification letters and/or email updates</li> <li>■ Public notices</li> <li>■ Factsheets addressing specific works, impacts or changes to conditions</li> <li>■ Website and SMS updates</li> </ul>	
	Cooperation with Traditional owners in cultural heritage management	
	Email addresses to ensure community members have direct access to the Project team	ARTC and 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		

Phase	Engagement mechanism	Responsibility
	Meet with Councils and other stakeholders with respect to agreed management measures	
	Day-to-day stakeholder liaison relating to construction activities and management of environmental impacts	
	Provide and promote contact details for availability of a Project representative by phone 24/7	
	Partnerships as agreed with the relevant stakeholders (e.g. community organisations and training providers)	
	Road/rail safety campaigns addressing the construction phase	
	Documentation of stakeholder interactions and identification of issues to be addressed as part of implementing the Project's environmental management strategies	

### Community Liaison Officer/s

Community liaison staff will be provided during the construction period, to:

- Support communication between the Contractor, nearby landowners, 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
- Facilitate provision of information to the wider community in relation to construction programming, the nature of construction work, and impact mitigation measures.

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.

Contact details for the Community Liaison Officer will be provided to all landowners in the disturbance footprint and will be made available to other community members through the Project's website and ARTC's other communication channels.

### Community Relations Monitor

The Project will engage an independent, appropriately skilled and experienced entity as the Community Relations Monitor for the duration of the construction phase. The roles and responsibilities of the Community Relations Monitor are set out in EIS Chapter 23: Draft Outline Environmental Management Plan and include:

- Provide monthly reports on community issues emerging from the construction and commissioning activities in relation to the Project conditions, the CEMP, complaints, monitoring and community relations
- Communicate with ARTC and the Environmental Monitor with regard to the SIMP, community consultation strategies and community concerns
- Review complaints procedures and the resolution of complaints and corrective action reporting to assess performance of the service provider's implementation of the SIMP and CEMP

- Facilitate discussions between the ARTC and the contractor and affected entities about mitigation measures as required by either the ARTC or affected entity
- Provide advice to the Environmental Monitor in relation to complaints.

### **8.2.5 Community Reference Groups**

The Contractor will facilitate the operation of CRGs during the detailed design phase. The CRGs will replace the CCCs established by ARTC for the EIS phase.

CRGs may be formed on a Project basis (e.g. one for each of the G2H, H2C and C2K projects) or on a locality basis (e.g. one in the Lockyer Valley LGA and one in the Ipswich GA). This will be finalised once the construction contract has been awarded.

The CRG/s will meet regularly until completion of construction to enable representation 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, and the effectiveness of environmental management measures
- 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 CRG membership will be selected through a public process e.g. advertising for members and selection of members according to published selection criteria.

The Contractor will be required to ensure community members and other stakeholder have access to CRG proceedings by providing endorsed copies of minutes and other meeting records for the public record and 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 Office of the Coordinator-General at the completion of construction.

### **8.2.6 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 other stakeholder. Information on where and how to lodge a complaint is readily available through established ARTC Inland Rail communication channels.

The Contractor is likely to implement its own complaints management process which will be required to align with ARTC's Complaint Management Handling Procedure.

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 will be conducted to determine whether the complaint is one which ARTC can resolve, or needs to be referred to another appropriate agency or party (for example a local council or government agency)
- **Planning:** Complaints that are straightforward can often be resolved on first contact. If this is not the case and the complaint requires investigation, a 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 conduct an investigation into 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.

### **8.2.7 Measures for ongoing engagement**

ARTC's commitments to community and stakeholder engagement include:

- Provision of clear and consistent information about Inland Rail and its associated projects
- Building a dialogue between landowners and the Project about land access and acquisition processes
- Working with local communities to understand their concerns and identify emerging social issues that need to be addressed at the Project or Program level
- Provision of clear and consistent information about the Project to community members
- Active engagement and effective communication with stakeholders and the community to enable ARTC to construct and operate the Project with the least social impact
- Provision of support to stakeholders and communities that are facing change due to Inland Rail

- Maintenance of communication mechanisms throughout the approval, 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 from the community, and the Project's webpage, including feedback mechanisms and an enquiry facility
- Provision of Project team availability to meet with stakeholders to discuss issues of specific concern
- Participation in community forums, networks and events.

ARTC will seek feedback on the efficacy of the stakeholder engagement and impact management measures to enable continuous improvement (refer to Section 8.2.7).

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 works being undertaken 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 matters such as 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 DSDILGP. 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 the findings of the draft EIS.

Inland Rail personnel will also meet with LVRC and ICC to discuss the draft EIS findings including proposed management measures outlined in the 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 (see Section 8.5.3).

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 DSDILGP and ARTC Inland Rail websites.

### **Engagement actions during detailed design, pre-construction and construction**

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 LVRC 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 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 8.5)
- 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 8.6)
- 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 SIA study area is home to culturally diverse communities, particularly in Gatton where international students and seasonal workers are part of the community, requiring a focus on communication in other languages during the construction phases, and with respect to road-rail safety during the operations phase. The Project’s information and safety education strategies will also address tourists and other travellers.

ARTC will deliver the actions and/or require its contractor to deliver the actions specified in Table 8-7 for each Project phase. Performance measures which will assist the Project to track the delivery and effectiveness of mitigation measures are provided in Table 8-8.

The Project’s Community and Stakeholder Engagement Plan for the construction phase will be reviewed annually and updated as required.

**Table 8-7 Community and stakeholder engagement**

Community and stakeholder engagement measures	
<b>Stakeholders</b>	<b>Landholders and tenants in and near the Project footprint i.e. within 1 km</b>
<b>Strategy</b>	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
<b>Impacts addressed</b>	<ul style="list-style-type: none"> <li>■ Disruption of property use and amenity</li> <li>■ Impacts on property access, access to water or connectivity</li> <li>■ Potential exacerbation of disadvantage</li> <li>■ Uncertainty and stress</li> </ul>
<b>Timing</b>	<b>Actions</b>
<b>Detailed design phase</b>	<ul style="list-style-type: none"> <li>■ 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</li> </ul>
	<ul style="list-style-type: none"> <li>■ 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:                             <ul style="list-style-type: none"> <li>– Property access arrangements</li> </ul> </li> </ul>

Community and stakeholder engagement measures	
	<ul style="list-style-type: none"> <li>– Appropriate access and egress solutions incorporated into the detailed design to enable movements across the rail corridor</li> <li>– Changes to road access</li> <li>– Surface water diversion</li> <li>– Any noise mitigation measures where these are triggered</li> <li>– Impacts on agricultural uses including farm infrastructure</li> <li>– Communication protocols</li> </ul>
	<ul style="list-style-type: none"> <li>■ Implement ARTC’s or the Constructing Authority’s Early Acquisition Policy where landowners meet the Policy’s provisions for hardship</li> </ul>
	<ul style="list-style-type: none"> <li>■ Communicate the need for consideration of landowners’ specific circumstances to the Constructing Authority and the Contractor, including any hardship circumstances (with landowners’ permission), property access arrangements, reparation of property infrastructure and ‘make good’ arrangements for any impacts on water infrastructure</li> </ul>
	<ul style="list-style-type: none"> <li>■ In consultation with the Constructing Authority and affected landholders, confirm mitigation arrangements for direct impacts on groundwater bores</li> </ul>
	<ul style="list-style-type: none"> <li>■ 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</li> </ul>
	<ul style="list-style-type: none"> <li>■ Communicate with all residents adjacent to and within 250 m of laydown areas and bridge construction sites in urban areas, and within 500 m in rural areas and above the tunnel construction areas to:                             <ul style="list-style-type: none"> <li>– Advise them of the measures provided in the Draft Outline EMP</li> <li>– Provide advance advice of the construction schedule and sequence (e.g. how long specific activities will take)</li> <li>– Describe the nature and causes of noise and vibration, and how noise and vibration will be mitigated</li> <li>– Identify any specific household concerns e.g. the presence of children or seniors who may be affected by noise, dust or change to property access, which need to be considered in implementation of environmental management measures</li> </ul> </li> </ul>
	<ul style="list-style-type: none"> <li>■ Consult with residents, landowners and business adjoining locations where concept rail noise barriers are being considered to seek input/feedback on the design of any final noise barriers</li> </ul>
	<ul style="list-style-type: none"> <li>■ Initiate and maintain communication and co-operation with local landowners during flood alert and recovery periods</li> </ul>
	<ul style="list-style-type: none"> <li>■ Provide appropriate information and assistance to landholders during the land resumption process to reduce uncertainties and support their adaptation to changes, including:                             <ul style="list-style-type: none"> <li>– 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</li> <li>– 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</li> <li>– With due regard to privacy and confidentiality, provide consultation data regarding households who may require assistance to find affordable housing to DTMR and DCHDE, to enable a collaborative response and reduce consultation fatigue</li> </ul> </li> </ul>

Community and stakeholder engagement measures	
	<ul style="list-style-type: none"> <li>– 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</li> </ul>
	<ul style="list-style-type: none"> <li>■ Maintain consultation with directly impacted landowners to ensure the impacts of land acquisition are minimised where possible, and that the needs and views of affected landowners are taken into account in the CEMP</li> </ul>
	<ul style="list-style-type: none"> <li>■ Ensure a focus on protecting residents' amenity in the Project's CEMP and Noise and Vibration Management Sub-plan (NVSP), referencing specific measures and SIMP recommendations where relevant</li> </ul>
	<ul style="list-style-type: none"> <li>■ 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</li> </ul>
	<ul style="list-style-type: none"> <li>■ 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</li> </ul>
	<ul style="list-style-type: none"> <li>■ Ensure that the Project's communications about air quality management include information about tunnel ventilation and air quality outcomes</li> </ul>
	<ul style="list-style-type: none"> <li>■ Establish and maintain consultation with potentially impacted communities, including:                             <ul style="list-style-type: none"> <li>– The CRG/s</li> <li>– Regular engagement with landowners who are adjacent to the rail corridor and areas used for construction</li> <li>– Advance notices and regular updates to directly affected landowners (where they remain on their properties) and households adjacent to the Project footprint, regarding construction programs, impacts and mitigation measures</li> <li>– Regular (at least quarterly) updates to potentially impacted communities in a form which is accessible to people without internet access</li> <li>– Updates to the Project's webpage and other locally available communication materials to include the Project's SIMP, quarterly construction updates including detailed explanations of upcoming activities, workforce ramp-up and stakeholder engagement mechanisms</li> <li>– Complaints and feedback mechanisms</li> <li>– Ongoing driver and community safety education</li> <li>– Promotion of the Project's communication channels, engagement mechanisms and complaints process</li> </ul> </li> </ul>
<b>Pre-construction phase</b>	<ul style="list-style-type: none"> <li>■ 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 actions)</li> </ul>
	<ul style="list-style-type: none"> <li>■ Establish and promote the complaints management handling procedure</li> </ul>
	<ul style="list-style-type: none"> <li>■ Communicate the Project's land access protocols, construction hours, Code of Conduct and complaints mechanism to residents and businesses adjoining the temporary construction disturbance footprint</li> </ul>
	<ul style="list-style-type: none"> <li>■ In advance of the commencement of pre-construction works, provide information to landholders, Councils, Traditional Owners and local communities about:                             <ul style="list-style-type: none"> <li>– The construction program and activities</li> <li>– The timing, duration and predicted impacts of the works with regard to homes, businesses and community facilities</li> </ul> </li> </ul>

Community and stakeholder engagement measures	
	<ul style="list-style-type: none"> <li>– The predicted effects of construction works on road, rail and pedestrian and cycle network operations</li> <li>– How to contact the Project</li> <li>– The complaints management system</li> </ul>
	<ul style="list-style-type: none"> <li>■ 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:                             <ul style="list-style-type: none"> <li>– Provide advance warning of the construction schedule and sequence (e.g. how long specific activities will take), and any disruptions to access or services</li> <li>– Describe the nature and causes of noise and vibration, and how noise and vibration will be mitigated</li> <li>– Advise on how long construction work will be heard or seen for each property</li> <li>– Provide 24-hour contact details for construction managers</li> </ul> </li> </ul>
	<ul style="list-style-type: none"> <li>■ Establish a blasting timetable through stakeholder consultation e.g. blasts times negotiated with surrounding sensitive receptors</li> </ul>
	<ul style="list-style-type: none"> <li>■ 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</li> </ul>
	<ul style="list-style-type: none"> <li>■ 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</li> </ul>
	<ul style="list-style-type: none"> <li>■ Provide advance notice e.g. email, letter, SMS or public notices of any significant dust generating activities</li> </ul>
<b>Construction phase</b>	<ul style="list-style-type: none"> <li>■ Provide monthly advance notices and updates to directly affected landholders (where they remain in local communities) and landholders adjacent to the temporary construction footprint regarding construction activities, impacts and mitigation measures</li> <li>■ 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</li> <li>■ Communicate the Project's land access protocols, construction hours, Code of Conduct and complaints mechanism to residents adjoining the disturbance footprint, and provide 24 hour/7-day contact details for Project representative</li> <li>■ Receive and consider feedback from landowners and the CRG in relation to the effectiveness of social and environmental impact management measures</li> <li>■ Consider and address any potential for coincidence of works that could have cumulative impacts in Calvert or Helidon in Project communication strategies</li> <li>■ 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</li> <li>■ Initiate and maintain communication and co-operation with local landholders during flood alert and recovery periods to support readiness and cooperation</li> <li>■ Engage an independent, appropriately skilled and experienced entity as the Community Relations Monitor</li> </ul>

Community and stakeholder engagement measures	
	<ul style="list-style-type: none"> <li>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</li> </ul>
<b>Stakeholders:</b>	<b>Other residents and businesses in potentially impacted communities</b>
<b>Strategy</b>	Provision of community information and engagement opportunities (including one or more CRGs) for residents of potentially affected communities
<b>Impacts addressed</b>	<ul style="list-style-type: none"> <li>Impacts on the amenity and character of rural areas due to construction works</li> <li>Disruptions to the traffic network</li> <li>Community safety</li> <li>Employment and business opportunities</li> <li>Impacts on community cohesion</li> </ul>
<b>Timing</b>	<b>Actions</b>
<b>Detailed design phase</b>	<ul style="list-style-type: none"> <li>Establish the CRG (see Section 8.2.5)</li> </ul>
	<ul style="list-style-type: none"> <li>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</li> </ul>
	<ul style="list-style-type: none"> <li>Ensure Project communications are accessible to people without internet access, people with low levels of education and people with limited skills in English via promotion and use of a telephone interpretation service (to continue until the end of construction)</li> </ul>
	<ul style="list-style-type: none"> <li>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</li> </ul>
	<ul style="list-style-type: none"> <li>Provide respectful and inclusive communication strategies about Project impacts on hydrology, flooding risks and mitigation, recognising that many local communities are still traumatised by the 2011 floods</li> </ul>
	<ul style="list-style-type: none"> <li>Communicate with residents who would have close views to the Project including tunnel buildings to explain the Project's construction program operational procedures and management measures relevant to their specific concern</li> </ul>
<b>Pre-construction and construction phase</b>	<ul style="list-style-type: none"> <li>A Community Liaison Officer will be provided, and contact details made available in all potentially impacted communities</li> </ul>
	<ul style="list-style-type: none"> <li>Provide and promote a complaints and feedback mechanism accessible to all local stakeholders, including the ability to resolve complaints regarding construction works or workforce behaviour</li> </ul>
	<ul style="list-style-type: none"> <li>Develop an incident notification and reporting process, including providing information to the community if an environmental incident occurs</li> </ul>
	<ul style="list-style-type: none"> <li>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</li> </ul>
	<ul style="list-style-type: none"> <li>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</li> </ul>
	<ul style="list-style-type: none"> <li>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</li> </ul>

Community and stakeholder engagement measures	
	<ul style="list-style-type: none"> <li>■ Prior to construction works which may result in noise impacts, provide sufficient information to sensitive receptors identified in the Noise and Vibration Sub-plan, as well as residents within at least 2 km of the disturbance footprint and other relevant stakeholders, to enable them to understand the likely nature, extent and duration of noise and vibration impacts during construction</li> </ul>
<b>Construction phase</b>	<ul style="list-style-type: none"> <li>■ Maintain employment of Community Liaison Officer/s</li> </ul>
	<ul style="list-style-type: none"> <li>■ Maintain the Project's CRG throughout the construction phase</li> </ul>
	<ul style="list-style-type: none"> <li>■ Maintain communication and engagement strategies initiated during pre-construction, including:                             <ul style="list-style-type: none"> <li>– Landowner liaison</li> <li>– Regular (at least quarterly) Project updates to potentially affected communities. Including the construction schedule and impacts that may be experienced e.g. noise or traffic disruption, and how the Project is mitigating those impacts</li> <li>– Traffic and road safety updates</li> <li>– Ongoing driver and community safety education</li> <li>– Notices and updates to LVRC, ICC, DTMR and DET (in relation to impacts on school bus routes)</li> </ul> </li> </ul>
	<ul style="list-style-type: none"> <li>■ Promotion of the Project's communication channels, engagement mechanisms and complaints process</li> </ul>
	<ul style="list-style-type: none"> <li>■ Provide regular (at least quarterly) updates to potentially impacted communities including detailed explanations of upcoming activities, workforce ramp-up and stakeholder engagement mechanisms</li> </ul>
	<ul style="list-style-type: none"> <li>■ Update the Project's webpage and locally available communication materials to include:                             <ul style="list-style-type: none"> <li>– The Project's EIS, draft Outline EMP, CEMP and SIMP</li> <li>– Quarterly construction updates, including detailed explanations of upcoming activities, workforce ramp-up, employment opportunities, stakeholder engagement mechanisms</li> <li>– SIMP monitoring and review reports</li> </ul> </li> </ul>
	<ul style="list-style-type: none"> <li>■ 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</li> </ul>
	<ul style="list-style-type: none"> <li>■ Maintain publicly available information (via websites, fact sheets and project updates) and availability of feedback mechanisms including phone, email and web-based facilities regarding:                             <ul style="list-style-type: none"> <li>– The construction schedule</li> <li>– Impacts that may be experienced e.g. noise or traffic disruption, and how the Project is mitigating those impacts</li> <li>– Road safety measures</li> <li>– How to communicate with the Project and the contractor</li> <li>– 24 hour/7-day contact details for Project representatives</li> </ul> </li> </ul>
	<ul style="list-style-type: none"> <li>■ Maintain provision of the Community Relations Monitor</li> </ul>
	<ul style="list-style-type: none"> <li>■ 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</li> </ul>
	<ul style="list-style-type: none"> <li>■ Implement a travel demand management community information campaign for the construction phase</li> </ul>



Community and stakeholder engagement measures	
	<ul style="list-style-type: none"> <li>■ Ahead of the operational phase:                             <ul style="list-style-type: none"> <li>– 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</li> <li>– 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</li> <li>– Renew contact with schools in the SIA study area 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</li> </ul> </li> </ul>
<b>Stakeholders:</b>	<b>Traditional Owners and other Indigenous community members</b>
<b>Strategy</b>	Cooperation with Traditional Owners and Indigenous community members to support cultural heritage management and enable their access to Project employment and business supply opportunities
<b>Impacts addressed</b>	<ul style="list-style-type: none"> <li>▪ Impacts on cultural landscapes</li> <li>▪ Training and employment opportunities</li> <li>▪ Business opportunities</li> </ul>
<b>Timing</b>	<b>Actions</b>
<b>Detailed design phase</b>	<ul style="list-style-type: none"> <li>■ 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</li> </ul>
	<ul style="list-style-type: none"> <li>■ Continue meeting with Yuggera Ugarapul People to enable opportunities to provide input regarding cultural values for consideration in the detailed design</li> </ul>
	<ul style="list-style-type: none"> <li>■ Plan with Yuggera Ugarapul People for cultural awareness tours for Project personnel including respect for cultural landscape features and cultural heritage sites (in progress during the EIS phase)</li> </ul>
	<ul style="list-style-type: none"> <li>■ Implement a ‘vehicle wrap’ program which will commission local Indigenous artists to provide designs for Project vehicles</li> </ul>
	<ul style="list-style-type: none"> <li>■ Commission local Indigenous artists to produce art works for ARTC offices in the Project region</li> </ul>
	<ul style="list-style-type: none"> <li>■ Consult with Yuggera Ugarapul People, CSQ, DSDSATSIP, training providers, LVRC and ICC to identify potential opportunities for early skilling programs for Indigenous worker (in progress during the EIS phase)</li> </ul>
	<ul style="list-style-type: none"> <li>■ Encourage Yuggera Ugarapul People to express their interest in the Indigenous Ranger program to DES</li> </ul>
	<ul style="list-style-type: none"> <li>■ Enable meetings between Yuggera Ugarapul People 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</li> </ul>
	<ul style="list-style-type: none"> <li>■ 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</li> </ul>

Community and stakeholder engagement measures	
	<ul style="list-style-type: none"> <li>■ Work with Traditional Owner groups to identify existing business capacity within their communities and help them to identify business capacity building programs to be supported by ARTC, DSDSATSIP and/or DITRDC, to be continued during pre-construction and if required, construction phases</li> </ul>
<b>Pre-construction phase</b>	<ul style="list-style-type: none"> <li>■ Involve Yuggera Ugarapul People in cultural heritage surveys for any proposed new quarry sites</li> </ul>
	<ul style="list-style-type: none"> <li>■ 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</li> </ul>
	<ul style="list-style-type: none"> <li>■ Implement Indigenous business capacity building programs in cooperation with DSDSATSIP, DSDILGP and Traditional Owners</li> </ul>
	<ul style="list-style-type: none"> <li>■ 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</li> </ul>
<b>Construction phase</b>	<ul style="list-style-type: none"> <li>■ 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</li> </ul>
	<ul style="list-style-type: none"> <li>■ 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</li> </ul>
	<ul style="list-style-type: none"> <li>■ Maintain regular cooperation with Yuggera Ugarapul People in accordance with the terms of the CHMPs</li> </ul>
	<ul style="list-style-type: none"> <li>■ Continue engagement and training programs with Indigenous community members to ensure operational roles are considered by Indigenous people</li> </ul>
	<ul style="list-style-type: none"> <li>■ Continue to cooperate with DESBT, DITRDC and local and Indigenous businesses to:                             <ul style="list-style-type: none"> <li>– Build businesses’ capacity to participate in the Project’s supply chain through business development, mentoring and pre-qualification projects</li> <li>– Support Indigenous businesses to ensure they are prepared for and provided with opportunities to participate</li> </ul> </li> </ul>
<b>Stakeholders:</b>	<b>LVRC and ICC</b>
<b>Strategy</b>	Cooperation with LVRC 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
<b>Impacts addressed</b>	<ul style="list-style-type: none"> <li>■ Impacts on amenity and local character, including noise</li> <li>■ Social opportunities</li> <li>■ Training opportunities</li> <li>■ Community wellbeing</li> <li>■ Connectivity</li> <li>■ Traffic safety</li> </ul>
<b>Timing</b>	<b>Actions</b>
<b>Detailed design phase</b>	<ul style="list-style-type: none"> <li>■ Meet with LVRC and ICC to agree the program for engagement with them, including issues to be discussed and the</li> </ul>
	<ul style="list-style-type: none"> <li>■ Meet with the LVRC and ICC to:                             <ul style="list-style-type: none"> <li>– Review the EIS findings</li> </ul> </li> </ul>

Community and stakeholder engagement measures	
	<ul style="list-style-type: none"> <li>■ Agree the program for engagement during the detailed design phase, including issues to be discussed and the program for discussion (e.g. water use, waste management, road network management and social impact management) and Council departments that will be involved</li> </ul>
	<ul style="list-style-type: none"> <li>■ Seek Council advice on minimising the impacts of roadworks on residents and tourists</li> </ul>
	<ul style="list-style-type: none"> <li>■ Where possible, incorporate Council advice on minimising the impacts of roadworks on residents and tourists in construction planning</li> </ul>
	<ul style="list-style-type: none"> <li>■ Include consideration of the use of identified cycle routes within the Queensland (PCNP) by construction traffic in the TMP</li> </ul>
	<ul style="list-style-type: none"> <li>■ Continue consultation with LVRC and ICC to:                             <ul style="list-style-type: none"> <li>– Plan and implement engagement with community members regarding Project works and social programs to address impacts on rural character and town amenity</li> <li>– Identify partnerships and initiatives to reduce or offset impacts on the character and amenity of local towns, with Gatton, Forest Hill and Grandchester as a key focus</li> <li>– Confirm mitigation measures for Council assets</li> <li>– Confirm alignment of Project initiatives with Regional Skills Initiatives Strategy projects</li> <li>– Agree on the form of specific mitigation triggered by noise exceedances or changes to access to Council-owned facilities (refer also Section 8.5)</li> <li>– Identify and prioritise Project investments in local communities to strengthen local social networks and provide opportunities for people to meet and participate in community activities and events</li> </ul> </li> </ul>
	<ul style="list-style-type: none"> <li>■ Identify emerging community needs (e.g. COVID-19 community recovery and activation of community organisations to support cohesion) which could be addressed through targeted funding to community organisations in each LGA</li> </ul>
	<ul style="list-style-type: none"> <li>■ Incorporate initiatives, projects and priorities identified in the Community Wellbeing Plan (refer Section 8.5).</li> </ul>
	<ul style="list-style-type: none"> <li>■ Communicate with ICC and LVRC 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</li> </ul>
	<ul style="list-style-type: none"> <li>■ Consult with ICC and LVRC to identify issues which should be addressed in the AMP</li> </ul>
	<ul style="list-style-type: none"> <li>■ 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 (see Section 8.6.5)</li> </ul>
	<ul style="list-style-type: none"> <li>■ Progress discussions with LVRC with respect to:                             <ul style="list-style-type: none"> <li>– Gatton, i.e. measures to support pedestrian connectivity within the town centre, protect and enhance the amenity of residents, businesses and community facilities, which may include investment in community facilities and/or parks, and offset off the loss of Apex Park</li> <li>– Forest Hill i.e. support for a local area planning process to identify challenges to the sustainability of businesses and the amenity of community facilities, measures to support town centre businesses, and measures to enhance the amenity of community facilities during the construction process</li> </ul> </li> </ul>
	<ul style="list-style-type: none"> <li>■ Progress discussions with ICC with respect to Grandchester, including measures to protect the town’s scenic character during construction, enhancements to community facilities, and offset for severance of the School Park Reserve</li> </ul>

Community and stakeholder engagement measures	
	<ul style="list-style-type: none"> <li>■ In finalising plans for landscape design, consult with LVRC, ICC and residents and business owners in Gatton, Forest Hill and Grandchester to seek and consider their feedback</li> </ul>
<b>Pre-construction phase</b>	<ul style="list-style-type: none"> <li>■ Provide advice to Councils about construction traffic routes, and seek their feedback in finalising the TMP</li> </ul>
	<ul style="list-style-type: none"> <li>■ Meet with ICC and LVRC to advise the schedule and program for pre-construction, including:                             <ul style="list-style-type: none"> <li>– When and where specific works would occur</li> <li>– The timing for commencement of works in road reserves and utility corridors</li> <li>– The schedule for implementation for traffic detours</li> </ul> </li> </ul>
	<ul style="list-style-type: none"> <li>■ Provide an update to ICC and LVRC on the implementation of the Community Wellbeing Plan and AMP, and seek their feedback</li> </ul>
<b>Construction phase</b>	<ul style="list-style-type: none"> <li>■ Meet with ICC and LVRC at least six monthly to:                             <ul style="list-style-type: none"> <li>– Review progress with the Community Wellbeing Plan and seek their feedback on the progress of community initiatives</li> <li>– Coordinate the implementation of initiatives shared between the Project and Councils e.g. place-making, training or tourism marketing initiatives</li> <li>– Seek Council inputs into monitoring the effectiveness of the AMP</li> <li>– Identify partnership opportunities to maximise social opportunities, including support for existing and/or additional community events</li> <li>– Seek Council's feedback and inputs regarding the effectiveness of the Project's community and stakeholder engagement strategies</li> <li>– 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</li> <li>– Monitor the effectiveness of management measures addressing road safety and road network management issues</li> <li>– Discuss other issues and any need for corrective actions as they arise</li> </ul> </li> </ul>
	<ul style="list-style-type: none"> <li>■ Continue consultation with local Councils and DTMR to ensure road safety concerns and road network management issues are addressed</li> </ul>
	<ul style="list-style-type: none"> <li>■ Implement the partnerships and initiatives agreed with LVRC, ICC and local communities during the detailed design phase, including:</li> </ul>
	<ul style="list-style-type: none"> <li>■ In cooperation with Councils, implement initiatives and agreements established in previous phases to mitigate impacts on the amenity and character of towns</li> </ul>
	<ul style="list-style-type: none"> <li>■ Provide information which could assist Councils with the development of planning controls which reduce residential exposure to rail noise</li> </ul>
	<ul style="list-style-type: none"> <li>■ Invite Council's review of annual SIMP reports and participation in annual SIMP reviews</li> </ul>
<b>Stakeholders:</b>	<b>Government and community service organisations</b>
<b>Strategy:</b>	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.

Community and stakeholder engagement measures	
<b>Impacts and benefits addressed</b>	<ul style="list-style-type: none"> <li>■ Stress, anxiety and mental health</li> <li>■ Demands on social infrastructure</li> <li>■ Community safety (e.g. traffic safety and emergency service capacity)</li> <li>■ Contribution to quality of life and community wellbeing</li> </ul>
<b>Timing</b>	<b>Actions</b>
<b>Detailed design phase</b>	<ul style="list-style-type: none"> <li>■ Provide an update on Project design, EIS findings and the construction program to Department of Education, Queensland Health, DCHDE, QPS, QAS and QFES</li> <li>■ Meet with the Department of Education and all schools identified in Table 7-4 to:                             <ul style="list-style-type: none"> <li>– Describe the construction schedule and the nature of road-rail interface treatments</li> <li>– 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</li> <li>– Provide a Project update and explain how construction traffic will be managed</li> <li>– 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</li> <li>– Identify any specific considerations (e.g. off-campus activities) which should be considered in the Project's TMP</li> </ul> </li> <li>■ Confirm Project contact details for the contractor</li> <li>■ Meet with Government agencies to confirm the detail of mitigation measures for impacts on social infrastructure and joint response arrangements with:                             <ul style="list-style-type: none"> <li>– Department of Education e.g. with respect to safety measures for construction traffic routes (as above) using school access routes</li> <li>– Queensland Health, e.g. forecasting the workforce ramp-up and agreeing the schedule for communication with the Project</li> <li>– QPS, QAS and QFES, e.g. seeking input to the Emergency Response Plan and progressing agreements for cooperation on emergency responses</li> <li>– DCHDE, e.g. in regard to emerging community needs (e.g. COVID-19 community recovery and monitoring of demands for community support services) and to ensure that they are aware of any support needed by DTMR tenants and have an opportunity to provide input to the AMP</li> </ul> </li> <li>■ 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</li> <li>■ Cooperate with DESBT, Department of Education, local high schools and training providers, to:                             <ul style="list-style-type: none"> <li>– Develop training pathways for employment in Project construction and operation</li> <li>– Identify young people and groups of young people who could be supported to access training for potential employment in the Project's operations</li> </ul> </li> </ul>

Community and stakeholder engagement measures	
	<ul style="list-style-type: none"> <li>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</li> </ul>
	<ul style="list-style-type: none"> <li>Consult QFES in detailing the mitigation measures regarding fire trails, firefighting and a cooperative response to any fire risks affecting the EIS investigation corridor</li> </ul>
	<ul style="list-style-type: none"> <li>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)</li> </ul>
	<ul style="list-style-type: none"> <li>Continue cooperation with DITRDC, DSDSATSIP and CSQ to develop training programs to be delivered through the Inland Rail Skills Academy to equip local people for Project employment</li> </ul>
	<ul style="list-style-type: none"> <li>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</li> </ul>
Pre-construction phase	<ul style="list-style-type: none"> <li>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.</li> </ul>
	<ul style="list-style-type: none"> <li>Ensure all Queensland Government agencies are registered as stakeholders to receive Project updates, fact sheets and newsletters</li> </ul>
	<ul style="list-style-type: none"> <li>Meet with the QPS, QFES and QAS to update advice on the Project's workforce ramp-up, changes to the road network review co-operative arrangements and ensure any safety or service access issues are identified and addressed</li> </ul>
	<ul style="list-style-type: none"> <li>Through consultation with DCHDE 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 DCHDE, ARTC and community organisations</li> </ul>
	<ul style="list-style-type: none"> <li>Consult with Department of Education to confirm their comfort with TMP measures regarding schools in Rosewood and Peak Crossing</li> </ul>
	<ul style="list-style-type: none"> <li>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</li> </ul>
	<ul style="list-style-type: none"> <li>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.</li> </ul>
	<ul style="list-style-type: none"> <li>Provide information on train schedules which would help emergency services responders to navigate access arrangements during operations</li> </ul>
Construction	<ul style="list-style-type: none"> <li>Develop tailored and targeted rail and road safety programs for delivery during construction to local schools and communities in the Project region</li> </ul>
	<ul style="list-style-type: none"> <li>Meet with DCHDE 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 DCHDE, ARTC and community organisations</li> </ul>
	<ul style="list-style-type: none"> <li>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</li> </ul>
	<ul style="list-style-type: none"> <li>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</li> </ul>



Community and stakeholder engagement measures	
	<ul style="list-style-type: none"> <li>■ Meet with DCHDE to monitor the effectiveness of the AMP, to a schedule agreed with DCHDE</li> <li>■ Develop a protocol between ARTC and emergency service providers, defining appropriate and coordinated responses and communication in the event of emergencies during operations</li> <li>■ 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 and investigate the need for joint training and response exercises to build capacity for Project-associated incident management during operation</li> </ul>
<b>Stakeholders:</b>	<b>Businesses in the SIA study area</b>
<b>Strategy</b>	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
<b>Impacts addressed</b>	<ul style="list-style-type: none"> <li>▪ Impacts on nearby event/tourism businesses</li> <li>▪ Impacts on agricultural businesses</li> <li>▪ Opportunities to supply the Project</li> </ul>
<b>Timing</b>	<b>Actions</b>
<b>Detailed design phase</b>	<ul style="list-style-type: none"> <li>■ Hold a workshop or other forum with local Chambers of Commerce, DSDILGP, DSDSATSIP 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</li> <li>■ 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: <ul style="list-style-type: none"> <li>– DITRDC</li> <li>– RDA</li> <li>– ICC</li> <li>– LVRC</li> <li>– Chambers of Commerce in the Ipswich and Lockyer Valley LGAs</li> </ul> </li> <li>■ Communicate with agricultural landholders in and adjacent to the Project footprint, in writing, and via meetings on request, to: <ul style="list-style-type: none"> <li>– Describe the construction schedule and the nature and location of works</li> <li>– Explain the land resumption process to landholders whose properties would be acquired and provide contact details for the Constructing Authority</li> <li>– Explain the result of EIS studies on noise and dust, as relevant to specific holdings or businesses</li> <li>– 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</li> <li>– Describe measures which ensure an appropriate level of access is maintained for agricultural businesses across and between properties directly affected by the Project</li> </ul> </li> </ul>

Community and stakeholder engagement measures	
	<ul style="list-style-type: none"> <li>– Propose a schedule for meetings between directly affected landholders and the Project during the pre-construction and construction phases</li> </ul>
	<ul style="list-style-type: none"> <li>■ 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:                             <ul style="list-style-type: none"> <li>– Explain the Draft Outline EMP, TMP and CEMP provisions and accept feedback on measures of relevance to tourism and related businesses</li> <li>– 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</li> <li>– Discuss support for the promotion of local tourism</li> <li>– Share information about opportunities for businesses to supply the Project</li> </ul> </li> </ul>
	<ul style="list-style-type: none"> <li>■ Work with RDA, DSDILGP, DSDSATSIP, ICC, LVRC, the Ipswich Chamber of Commerce, and Lockyer Valley Chamber of Commerce and Industry 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</li> </ul>
	<ul style="list-style-type: none"> <li>■ In developing the AMP, consult with the Lockyer Valley 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 and avoid Project use of accommodation which may displace tourists or event visitors</li> </ul>
	<ul style="list-style-type: none"> <li>■ Establish consultative arrangements with Lockyer Valley Chamber of Commerce and Industry and Ipswich Chambers of Commerce to support monitoring of any issues identified in relation to labour draw</li> </ul>
<b>Pre-construction phase</b>	<ul style="list-style-type: none"> <li>■ Cooperate with tourism business owners, Lockyer Valley Tourism Association, Ipswich Tourism Operators Network, ICC and LVRC, 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</li> </ul>
	<ul style="list-style-type: none"> <li>■ 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 Lockyer Valley and Ipswich locations</li> </ul>
	<ul style="list-style-type: none"> <li>■ Provide regular updates via emails to local and regional businesses to ensure they have access to current information about the Project</li> </ul>
	<ul style="list-style-type: none"> <li>■ 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</li> </ul>
<b>Construction phase</b>	<ul style="list-style-type: none"> <li>■ 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</li> </ul>
	<ul style="list-style-type: none"> <li>■ Implement business capacity building programs agreed with RDA, DSDILGP/DRDMW, DSDSATSIP, ICC, LVRC, Ipswich Chamber of Commerce and Lockyer Valley Chamber of Commerce in the detailed design phase, as part of the Inland Rail Skills Academy</li> </ul>
	<ul style="list-style-type: none"> <li>■ 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)</li> </ul>

Community and stakeholder engagement measures	
	<ul style="list-style-type: none"> <li>■ Implement measures agreed with Lockyer Valley Tourism Association, Ipswich Tourist Operators Network and the Ipswich and Lockyer Valley Regional Councils to mitigate impacts on tourism during the construction stage</li> </ul>
	<ul style="list-style-type: none"> <li>■ 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</li> </ul>
	<ul style="list-style-type: none"> <li>■ Promote Government services and programs which are available to businesses considering investment in projects related to Inland Rail</li> </ul>

**8.2.8 Community and stakeholder engagement during operation**

Prior to completion of the construction phase, a Community and Stakeholder Engagement Plan for the commissioning and operational phases will be developed which will include:

- Mechanisms for communication and co-operation with landowners and residents who are adjacent to the rail corridor or who may experience impacts such as noise, dust, vibration or and/or other impacts
- 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
- Community updates on maintenance and track works
- Emergency services access to a timetable of train movements
- Complaints and feedback mechanisms.

The Project’s Community and Stakeholder Engagement Plan for operations will be reviewed in Year 3 of operations to determine any need for revision of the plan.

**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 indicators	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	<ul style="list-style-type: none"> <li>■ CRG feedback confirms ARTC has engendered positive relationships</li> <li>■ Number of complaints about Project impacts</li> <li>■ Project can demonstrate that mitigation measures are refined where necessary in response to stakeholder feedback</li> <li>■ Community Relations Monitor identifies positive feedback on the Project's community and stakeholder relations</li> </ul>	<ul style="list-style-type: none"> <li>■ 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</li> <li>■ Contractor will request feedback about stakeholder engagement and relationships as a regular item at CRG meetings</li> <li>■ Community Relations Monitor will review and provide advice on the Stakeholder and Community Engagement Plan, and be available to community members</li> </ul>	Monthly monitoring, quarterly reporting to CRG, during construction phase
Community members have access to information and support to assist adaptation to changes resulting from the Project	<ul style="list-style-type: none"> <li>■ CRG and Council feedback confirms satisfactory access to timely information about the Project and management measures</li> <li>■ Households who need to move from within the Project footprint have access to support, if required</li> <li>■ Mental health partnership is maintained during the construction phase</li> <li>■ Tele-interpretation services are available to translate Project information for people with limited English skills</li> </ul>	<ul style="list-style-type: none"> <li>■ Feedback on the effectiveness of community and stakeholder engagement measures requested at each CRG meeting and in meetings with Councils</li> <li>■ Community Relations Monitor</li> <li>■ Complaints register</li> <li>■ ARTC and PHNs will monitor service uptake (mental health and relocation support) from potentially impacted communities</li> </ul>	Quarterly during first two years of construction, then as agreed with Community Relations Monitor
Stakeholder issues and grievances are identified, evaluated, addressed and recorded	<ul style="list-style-type: none"> <li>■ The Project responds to complaints from community members as per the Contractor's complaints management system which will be aligned with ARTC's Complaints Management System</li> <li>■ The Contractor will provide transparency to the resolution of complaints</li> </ul>	<ul style="list-style-type: none"> <li>■ The Contractor will maintain a complaints register, monitor complaints and the status of their resolution, and provide a report on complaints at each CRG meeting</li> <li>■ 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</li> </ul>	Monthly monitoring, quarterly reporting to CRG during construction

Outcomes	Performance indicators	Mechanism	Timing
Initiatives identified through stakeholder engagement have benefits for local communities and offset impacts on amenity, character and cohesion	<ul style="list-style-type: none"> <li>■ Number and outcome measures (to be determined with partners) for community partnerships and programs in potentially impacted communities</li> <li>■ CRG will receive reports on SIMP implementation and AMP implementation for their feedback</li> </ul>	<ul style="list-style-type: none"> <li>■ ARTC and/or the contractor will agree outcome metrics with funded projects and partners</li> <li>■ Information on Project-supported initiatives will be provided to the CRG for feedback</li> <li>■ Feedback from Council/ community/ government partners</li> </ul>	<p>Annually during construction</p> <p>Reports on SIMP implementation at each CRG meeting, and on AMP implementation on a six-monthly basis</p>

**8.2.10 Incorporation of stakeholder inputs in development of management measures**

As described in Section 8.2.7, ARTC will conduct community information sessions and other meetings with stakeholders during the EIS display period to seek stakeholders’ feedback on the EIS.

ARTC will continue engagement with LVRC and ICC 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 (8.4.5) and acceptable accommodation solutions
- Workforce management: obtaining an update on Councils’ priorities as part of RSIS, SQW, and economic development/recovery initiatives, and confirming 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 (see 8.5.3) 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 stakeholder engagement 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 detailed 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, with CEMP or SIMP measures to be refined if unacceptable or unexpected impacts are identified

- 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 up to 410 people at peak, and approximately 190 personnel on average throughout the construction period.

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

- Facilitating skills development opportunities through the Inland Rail Skills Academy to build regional capacity in construction and rail operation
- Building partnerships with training providers to strengthen workforce skills in the SIA study area and reduce the potential for cumulative impacts to draw labour and skills from other businesses
- Requiring construction contractors to employ locally, and to implement workforce training and diversity strategies.

ARTC commits to providing a safe and healthy workplace for all personnel, and to ensuring that workforce behaviour avoids impacts on community safety, residents' privacy and community values.

The following sections outline the Project's management measures to achieve local community benefits through employment and training.

#### 8.3.1 Local employment

As noted in Section 8.1.2, Australian Jobs Act defines 'local' as including Australian entities, however for the Project, ARTC is also focusing on activities which maximise opportunities in the Project Area i.e. the Lockyer Valley and Ipswich LGAs.

##### Labour availability

SIA consultation and analysis of labour force data have identified established strengths in major project construction within the labour force and businesses in the SIA study area. 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.

The Project expects to be able to draw a large proportion of its construction workforce from the Lockyer Valley and Ipswich LGAs as:

- Both LGAs have established workforce strengths in construction, with approximately 8,356 people working in the construction industry in 2016 (refer to Section 5.4.1) and more than 2,400 registered construction industry businesses in the Project region in 2016-17 (refer Section 5.4.3)
- In March 2020, 10,326 Project region residents were unemployed, including 9,148 Ipswich LGA residents and 1,178 residents in the Lockyer Valley LGA (DESE, 2020)
- Between March 2020 and June 2020, the number of Ipswich LGA residents receiving Jobseeker or Youth Allowance increased from 11,400 to 18,485 people (an increase of 62.1 percent) whilst the



number of Lockyer Valley residents receiving these benefits increased from 1,903 to 2,940 people (an increase of 54.5 percent) over the same period (Id.Profile, 2020). This was largely due to decreased economic activity resulting from COVID-19 restrictions and indicates that in 2020, the availability of labour is significantly higher than in previous years

- The Project's workforce is expected to peak in 2022 at approximately 410 personnel, with an average requirement across the construction period of approximately 190 personnel, which would not cause a significant drain on the Project regions' labour force
- Regional level labour projections for 2018-2023 indicated that the West Moreton region (which includes Ipswich and Lockyer Valley East) is projected to have an average annual average surplus in construction workers until 2023.

The availability of construction specialists and skilled labour changes in response to the cumulative demands of major projects. ARTC is undertaking labour force analysis in partnership with CSQ, with consideration to the cumulative impacts of Inland Rail and other major infrastructure projects. This will support the development of local and regional training partnerships to address skills gaps. It will also enable ARTC to refine mitigations to address potential cumulative impacts on labour availability or housing if necessary (refer Section 8.4).

It is possible that in the cumulative context, the Project will compete for labour with other major infrastructure projects (refer Section 7.6). 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.

### **Maximising local employment and Indigenous employment**

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
- 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 can 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 this SIA Technical Report, to assist in establishing appropriate social performance commitments and targets
- Required to consult with CSQ to understand skills analysis modelling and implications for labour requirements, and to look for opportunities to align skills development activities with broader CSQ 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. Indigenous, youth and female employment)
  - Training and apprenticeship goals for the construction phase
  - Strategies for recruitment and training of personnel from the Lockyer Valley and Ipswich LGAs
  - Workforce Code of Conduct.

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.

ARTC will require the Contractor to develop and implement a workforce management plan as part of the detailed design phase. This will include:

- Strategies for recruitment and training of personnel from the SIA study area
- Training and apprenticeship strategies
- Youth, female and Indigenous employment strategies
- Workforce health and safety strategies
- Workforce management policies
- A Local Employment Register.

Inland Rail's AIPP and Sustainable Procurement Policy will maximise the involvement of businesses with existing capacity, and include a focus on building local businesses' capacity, to increase the number of businesses in the SIA study area 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.

During the construction period, the Contractor will be required to report to ARTC on the delivery and outcomes of these goals and strategies. Regular updates will be provided through a quarterly public snapshot report on the employment and business participation from the Lockyer Valley and Ipswich LGAs.

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 training, recruitment and employment strategies established by ARTC and/or the Contractor.

### 8.3.2 Training and development in the Project region

Inland Rail has a signed MOU 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 is establishing the Inland Rail Skills Academy to enhance career pathways and workforce skills for people in regions through which Inland Rail would pass, including:

- 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.

Inland Rail Skills Academy partnerships will build capacity for the involvement of SIA study area residents in employment and Project supply opportunities, which may be transferable to future projects or other industries. This will include targeted training opportunities for Indigenous people.

To date, this has involved:

- Cooperation with ICC’s RSIS coordinator to agree a SQW project which will deliver an Indigenous training program to develop ‘working with rail’ skills (in progress)
- Cooperation with LVRC’s RSIS coordinator to agree a SQW project which will deliver construction skills training in the Lockyer Valley (in progress)
- With USQ, 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

An opportunity to work with the Lockyer District State High school, which has acknowledged expertise in STEM education was also identified and will be pursued as part of the Inland Rail Skills Academy.

The Contractor will also implement training and apprenticeship programs in accordance with its workforce management plan, which will be developed during the detailed design phase and approved by ARTC prior to construction.

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.

### 8.3.3 Indigenous training and employment

Training and employment opportunities are key priorities for Indigenous people who participated in SIA consultation. Inland Rail has a particular focus on optimising Indigenous employment in its projects. ARTC's MOU with CSQ includes a specific focus on training programs targeted towards Indigenous jobseekers. As a first step, a partnership with ICC to deliver a SQW training program for local Indigenous people is in progress.

ARTC has made specific commitments to training and development opportunities for Indigenous people, including:

- Working with Traditional Owners, Indigenous communities, industry and government agencies to support the design and delivery of training and development programs to improve local capacity where this is needed, and increase the number of Indigenous people applying for Project-related jobs
- Working with schools and training providers to provide appropriate training for Indigenous people, which would include working with Lockyer District State High School, Ipswich State High School and Bremer State High School to identify young people who would be interested in training opportunities
- Providing a workplace that is inclusive and values the contributions of Aboriginal and Torres Strait Islander personnel.

Measures identified in consultation with Traditional Owners for implementation in the detailed design phase are detailed in Table 8-9.

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 Workforce management

In addition to strengthening the SIA study area's skills base and ensuring local employment in the project, 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.

The Contractor will provide a safe and healthy workplace in accordance with the Work Health and Safety Act 2011 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:

- Implementing and enforcing a Code of Conduct containing requirements for positive behaviours and respect for local residents and businesses which will apply to all personnel
- Workforce management standards will include prescribed working hours, local access arrangements and parking arrangements for commuter vehicles

- The Contractor will have appropriate work conduct policies and procedures, and complaints mechanisms which ensure fast and effective resolution to any issues experienced.

**8.3.5 Impacts on other businesses**

ARTC is working with the owners of agricultural properties to minimise the impacts of land acquisition on their productivity and therefore on agricultural employment opportunities (refer Section 8.6.1).

There is potential to impact on the amenity of businesses in Gatton and Forest Hill during construction, and for road works to cause disruptions to access to businesses, with implications for employment availability. There is also a possibility that tourism businesses may experience changes to employment levels if tourists are deterred by changes to scenic character or road works during construction. Management measures which address these potential impacts are provided in Section 8.6.2.

As outlined in Section 7.6, cumulative social impacts may include exacerbation of current shortages of skilled labour 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.

**8.3.6 Action plan**

Table 8-9 summarises workforce management and development objectives, outcomes and actions which will maximise the employment of people from the SIA study area and Indigenous people in the Project’s construction workforce and increase the skills profile of the SIA study area’s labour force.

There is also the potential for people from local communities to gain employment in Project operations, with roles including maintenance and environmental management, signalling and tunnel control. Actions initiated during the construction phase will address development of capacity of the local and regional workforce for employment in the operational phase. Management of the Project’s operational workforce will be in accordance with ARTC’s established training, recruitment and employment strategies.

**Table 8-9 Workforce management**

Workforce management measures	
<b>Objectives</b>	<ul style="list-style-type: none"> <li>■ Enable residents of nearby communities and the SIA study area to access the Project’s construction and operational employment opportunities</li> <li>■ Provide a safe and healthy workplace for all personnel</li> <li>■ Facilitate and support workforce training and development pathways to build labour force skills for Project employment</li> <li>■ Minimise impacts on employment in other industries</li> <li>■ Manage workforce behaviour to avoid impacts on community safety and community values</li> </ul>
<b>Outcomes</b>	<ul style="list-style-type: none"> <li>■ Workers within 125 km of the Project including job seekers living in the SIA study area are involved in the construction workforce, with a particular focus on providing opportunities for residents in potentially impacted communities</li> <li>■ ARTC and Contractor partnerships contribute to increased training and development opportunities in the Project region, and reduce labour draw</li> <li>■ Construction employment opportunities are available to Yuggera Ugarapul People and other local Indigenous people</li> <li>■ All Project personnel behave with respect and courtesy towards residents, landowners and motorists</li> </ul>

Workforce management measures	
	<ul style="list-style-type: none"> <li>■ Workplace health and safety are supported by through a strong workforce safety culture</li> <li>■ Impacts on agricultural or tourism employment opportunities are minimised</li> </ul>
<b>ARTC Commitments</b>	<ul style="list-style-type: none"> <li>■ Require contractors and operators to seek workers from within the SIA study area by:                             <ul style="list-style-type: none"> <li>– Identifying the skills required in the building, construction, equipment and services fabrication and supply, maintenance, operation and support to Inland Rail, for its design, construction, operational and maintenance phases</li> <li>– Arranging timely training and qualification arrangements to meet the needs of skills development to support all phases of Inland Rail</li> <li>– Ensuring that training and qualification systems meet the requirements of the National Standards Framework</li> </ul> </li> <li>■ Ensure people in potentially impacted communities have opportunities to access training related to Project requirements</li> <li>■ Identify and communicate to training partners the skills required in construction, operation and maintenance of Inland Rail</li> <li>■ Work closely with local Indigenous communities, Yuggera Ugarapul People, DSDILGP, DESBT and DSDSATSIP to strengthen community members' capacity for employment, support the design and delivery of training and development programs and encourage applications for Project-related jobs from Indigenous people</li> <li>■ Provide a clear and efficient process for people to seek information about employment opportunities and register their interest</li> <li>■ Work with key partners to link training and development programs with other projects and local industries to provide the greatest regional benefit</li> <li>■ Work with schools and local training providers to provide appropriate training including STEM initiatives and scholarship for students from potentially impacted communities</li> <li>■ 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</li> <li>■ Work with Queensland Government and Australian Government departments to provide long-term outcomes through training, mentoring and other support programs</li> <li>■ Provide a workplace that is inclusive and values the contributions of Aboriginal and Torres Strait Islander personnel</li> </ul>
<b>Measures - detailed design phase</b>	<p><b>Local employment</b></p> <ul style="list-style-type: none"> <li>■ 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 Inland Rail training and development programs (in progress)</li> <li>■ Require the Contractor to develop a workforce management plan to optimise employment of people from the Project region, including:                             <ul style="list-style-type: none"> <li>– Proposed strategies for recruitment and training of personnel from the Project region</li> <li>– Training and apprenticeship strategies</li> <li>– Youth, female and Indigenous employment goals and strategies</li> <li>– Workforce health and safety strategies</li> <li>– Workforce code of conduct and management policies</li> </ul> </li> </ul>



Workforce management measures	
	<ul style="list-style-type: none"> <li>– Local Employment Register</li> </ul> <p><b>Training and development</b></p> <ul style="list-style-type: none"> <li>■ Consult with employment support and training providers in the SIA study area to identify people with relevant qualifications, experience and aptitudes, and identify and address gaps in their readiness for work as part of the Project’s construction phase</li> <li>■ Continue to consult with DESBT to identify opportunities to align Inland Rail’s workforce training and development initiatives with the Queensland Government’s jobs, skills and workforce diversity programs</li> <li>■ Continue to work with ICC and LVRC RSIS coordinators and economic development teams to identify opportunities to align Inland Rail’s workforce training and development initiatives with RSIS projects in the SIA study area, including cross-over skills between construction training and RSIS priorities, and utilisation of the SQW program</li> <li>■ Work with DITRDC, DSDSATSIP, Department of Education, Registered Training Organisations and CSQ to develop training programs to be delivered through the Inland Rail Skills Academy to equip local people for employment in Project construction and operation</li> <li>■ Commence implementation of Inland Rail Skills Academy programs</li> </ul> <p><b>Indigenous employment</b></p> <ul style="list-style-type: none"> <li>■ Work with Yuggera Ugarapul People, DSDSATSIP and Indigenous training and employment service providers to develop employment and training strategies for Indigenous job seekers to be delivered through the Inland Rail Skills Academy</li> <li>■ Consult local state high schools to identify Indigenous young people who may be interested in Inland Rail training and employment opportunities and support their access to training</li> <li>■ Require contractors to specify and meet Indigenous employment goals</li> <li>■ Facilitate a meeting between Yuggera Ugarapul People and DSDSATSIP to discuss the Project and assistance available for business capacity and training programs (complete)</li> <li>■ Consult with Yuggera Ugarapul People, CSQ, DSDSATSIP and training providers, ICC and LVRC to identify potential opportunities for early skilling programs for Indigenous workers and implement the Indigenous ‘skills for rail’ training program with ICC</li> <li>■ Enable meetings between Yuggera Ugarapul People and the Contractor to discuss targeted initiatives such as training and mentorship for Indigenous workers</li> </ul> <p><b>Employment in other industries</b></p> <ul style="list-style-type: none"> <li>■ Work with agricultural and other business owners to refine design and construction planning measures aimed at minimising any impacts on productivity or employment (refer Section 8.6)</li> <li>■ Implement measures agreed with directly affected and adjacent landholders (refer Section 8.6) to reduce potential impacts on farm productivity which may otherwise affect the availability of agricultural employment</li> <li>■ Consult with LVRC and businesses in Gatton and Forest Hill regarding CEMP and TMP measures which address impacts on pedestrian and vehicular access to businesses, and refine measures in response to their feedback</li> </ul> <p><b>Workforce behaviour</b></p> <ul style="list-style-type: none"> <li>■ Require the Contractor to develop a Workforce Code of Conduct aligned with ARTC’s expectations</li> </ul>

Workforce management measures	
	<ul style="list-style-type: none"> <li>■ Review the Contractor’s Workforce Code of Conduct to ensure it reflects SIMP recommendations regarding respectful and positive behaviours by Project personnel</li> </ul>
<b>Measures - pre-construction phase</b>	<p><b>Local and Indigenous employment</b></p> <ul style="list-style-type: none"> <li>■ Provide information to SIA study area residents (including those without internet access) regarding the construction timeframe, employment opportunities and how to express interest in employment, contracting or supply opportunities</li> <li>■ Consult with employment support and training providers to identify local people with relevant qualifications and experience, and develop training strategies to address gaps in their readiness for work as part of the Project’s construction phase</li> <li>■ Establish a Local Employment Register to track and monitor participation in construction employment by people from the SIA study area, including identification of Indigenous personnel with their agreement</li> <li>■ The workforce management plan will be implemented by the Contractor and its delivery monitored by ARTC</li> </ul> <p><b>Training and development</b></p> <ul style="list-style-type: none"> <li>■ In response to CSQ analysis of labour and skills availability, refine local and regional recruitment and training strategies</li> <li>■ In partnership with DITRDC and Inland Rail Skills Academy, deliver training programs which equip local and Indigenous people for construction and operational employment</li> <li>■ Implement training and development initiatives as part of the Inland Rail Skills Academy which will increase workforce skills applicable to other industries in the region e.g. agriculture</li> <li>■ 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</li> <li>■ The Contractor will develop and implement training and apprenticeship programs in accordance with its workforce management plan, which will be approved by ARTC</li> </ul> <p><b>Workforce behaviour</b></p> <ul style="list-style-type: none"> <li>■ Require all Project personnel to comply with the Contractor’s approved Workforce Code of Conduct, complemented by complaints mechanisms which ensure fast and effective resolution to any issues experienced</li> <li>■ Implement authorisation procedures and means of identification for personnel accessing private property</li> </ul>
<b>Measures – construction phase</b>	<p><b>Local and Indigenous employment</b></p> <ul style="list-style-type: none"> <li>■ Use (and/or require Contractor to use) multiple platforms to advertise job opportunities, and promote the availability of employment including expression of Interest forms, community forums, newsletters and websites</li> <li>■ Monitor delivery of the Contractor’s workforce management plan, including requirements to report on employment participation and initiatives for Indigenous people, women, people under 25 years and residents from the Project region and require corrective actions (e.g. improved local training and recruitment strategies) if targets are not being met</li> <li>■ Require Contractor to maintain a Local Employment Register</li> <li>■ 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</li> <li>■ Ensure local businesses are aware of Project opportunities (refer Section 8.6)</li> </ul>

Workforce management measures	
	<p><b>Training and development</b></p> <ul style="list-style-type: none"> <li>■ Implementation of Inland Rail Skills Academy partnerships and programs including programs agreed with Councils that align with RSIS priorities and support SQW programs</li> <li>■ Continue to implement training programs and partnerships to equip local and Indigenous people for construction employment as part of the Inland Rail Skills Academy and/or as part of the contractor’s delivery plans</li> <li>■ Consult with high schools and training providers in the SIA study area to identify training pathways and develop programs which will support local people to obtain employment in the Project’s operations</li> <li>■ Consult with QR about potential for a partnership to support training programs which equip local people for employment in Project operations</li> </ul> <p><b>Employment in other industries</b></p> <ul style="list-style-type: none"> <li>■ Monitor Inland Rail projects’ workforce ramp-up and the proportion of Project personnel drawn from within the Project region</li> <li>■ Consult with local Councils and Chambers of Commerce regarding any pressures they identify on local labour availability</li> <li>■ Monitor baseline data on vacancies in the tourism and agricultural sectors annually</li> <li>■ 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</li> <li>■ Maintain support for training programs which equip local people for construction employment</li> </ul> <p><b>Workforce management</b></p> <ul style="list-style-type: none"> <li>■ Require all Project personnel to comply with the Contractor’s approved Workforce Code of Conduct, complemented by complaints mechanisms which ensure fast and effective resolution to any issues experienced</li> <li>■ Require the contractor to report on implementation of and compliance with the Code of Conduct</li> <li>■ Implement authorisation procedures and means of identification for personnel accessing private property</li> </ul>

## 8.4 Housing and accommodation

This section outlines the measures ARTC will undertake to ensure that impacts on housing access, affordable accommodation and short-term accommodation are mitigated, and to address cumulative workforce accommodation demands if they occur. Measures to address concerns regarding the potential for impacts on property values are also outlined, acknowledging that the environmental management and measures provided in EIS Chapter 23: Draft Outline Environmental Management Plan are intended to mitigate impacts on amenity which could affect property values.

### 8.4.1 Affordable housing

The Project expects that construction personnel will be drawn from communities in the Project region and nearby LGAs. 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.

Assessment of impacts on housing (Section 7.3) indicates that the Project would require the removal of approximately 26 houses within the EIS investigation corridor. This will require the relocation of residents but is unlikely to affect housing demand or housing costs in the SIA study area (refer Section 7.3.2).

As noted in Section 7.1.2, there is potential for up to six households renting DTMR houses in the EIS investigation corridor to need to relocate and to require support do so.

The Project will work with DTMR and DCHDE during the detailed design phase to develop and implement a joint work program between DTMR/DCHDE and ARTC/the Contractor to:

- Engage with DTMR tenants to explain the timeframe for Project works and their relocation, and identify their specific support needs
- Support displaced DTMR tenants to find alternative affordable accommodation and maintain social support and social networks
- Support households whose homes are within the disturbance footprint to relocate, including referral to services who can provide practical and social support if needed.

This may also involve provision of financial support to an organisation such as Lifeline or Laidley Crisis Care and Accommodation to provide localised support to relocating residents.

ARTC will also communicate with ICC and LVRC 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.

#### **8.4.2 Seasonal workers' accommodation**

The Gatton Caravan Park is likely to be directly and indirectly impacted by the construction and operation of the Project. Land acquisition is expected to be required within the caravan park, with potential for a reduction in its current capacity of approximately 15 percent, and a potential reduction in future planned total capacity of up to 28 percent. Consultation with the caravan park managers has confirmed that there are no short-term or long-term residents (i.e. lower income households) living in the caravan park, and no current tourism visitation. ARTC is continuing to engage with the caravan park's owner to manage the potential impacts of the Project and conduct a detailed assessment of the social impacts that could result from a material change in operation of the caravan park (refer to Section 7.3.6) .

The amenity of the Gatton Caravan Park would be impacted by construction noise and the proximity of construction activities. The Project will engage with the caravan park's owner to determine mitigation options to address construction impacts including noise, dust, impacts on scenic amenity, pedestrian and cycle access and vehicle access (refer Table 8-10). With respect to operational noise, transmission noise control may be required, and would be designed in consultation with the caravan park owner and LVRC.

The extent of acquisition of land within the caravan park will be determined by the Constructing Authority based on the detailed design. Full acquisition is not anticipated but if this were to occur and result in the loss of the caravan park from Gatton, the Project will deliver the mitigation measures outlined in Section 7.3.7 (refer also Table 8-10). This may also include providing information to alternate accommodation providers e.g. Grantham Farmworkers Lodge (which has capacity for expansion) and proponents of affordable accommodation projects in the Gatton area to enable them to make decisions about their development plans, with potential for partnerships with ARTC to develop accommodation. The Project will also consult with the owner of the Homestyle Lodge in Laidley to identify any mitigation measures required in respect to potential noise exceedances during construction in the Laidley area (engagement was sought but not achieved during the SIA process).

### 8.4.3 Short-term accommodation

The Project is not expected to result in a significant increase in demand for short-term accommodation in the SIA study area during construction, as it expects to draw the majority of the workforce from the Project region and nearby LGAs. The construction period may result in a small increase in demand for short-term accommodation within the Ipswich and Lockyer Valley LGAs, but this demand may also be met in the Toowoomba LGA. As described in Section 7.3.5, accommodation in the Lockyer Valley LGA is likely to have some capacity to meet workforce demands, and accommodation providers would welcome the opportunity to increase trade, but this will need to be monitored to manage any potential to ‘crowd out’ tourists and other travellers. The city centres of Ipswich (within a 30 minute drive of Calvert) and Toowoomba (within a 20 minute drive of Helidon) are also accessible to Project personnel and collectively are estimated to have availability, on average, of more than 600 hotel and motel rooms. In the event that up to 20 per cent of the peak workforce required accommodation (82 personnel), this would be equivalent to approximately 14 per cent of the rooms estimated to be available across the three LGAs.

Lockyer Hotel and Forest Hill Hotel in Forest Hill, and the Royal Hotel and Commercial Hotel in Gatton, are located within 100 m of the Project. During the detailed design phase, the Project will continue to engage with the owners of these establishments to identify the need for property-specific mitigation measures to minimise noise and dust impacts on amenity and ensure vehicle and pedestrian access to the hotels is maintained during construction. The Project will also consult with the owners of these hotels to identify their capacity to accommodate Project personnel if accommodation is required, and to monitor Project demands to ensure the hotels’ tourist trade is not crowded out by workforce demands.

There is potential for cumulative labour force demands to result from the construction of multiple projects in the Project region and other parts of SEQ, which may require the Project to source labour from beyond a daily commuting distance, resulting in a need for accommodation for personnel. There is also the potential for cumulative impacts on the availability of short-term accommodation to result if multiple projects are constructed during the Project’s construction timeframe (2021-2026). This will be addressed as part of the AMP (refer below).

The number of operational personnel requiring accommodation would be very small in the context of the Project region’s accommodation supply and would not impact on accommodation availability.

### 8.4.4 Property values

Landowners in the EIS investigation corridor are concerned that their property values will decrease as the result of the Project’s construction or operation. ARTC has committed to a comprehensive range of environmental and social impact management strategies which will reduce the potential for impacts on amenity, use or environmental qualities of properties near the rail corridor. ARTC will also communicate its commitments to environmental management, and EIS approval conditions, to local and regional community members, to reduce the likelihood of negative perceptions about the amenity of properties in or near EIS investigation corridor.

### 8.4.5 Accommodation Management Plan

ARTC has developed program-wide accommodation principles for use when developing, selecting and deploying accommodation solutions, to support three desired outcomes:

- Accommodation solutions to 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 Accommodation Management Plan which will reflect ARTC's accommodation management principles for ARTC's approval during the detailed design phase.

The AMP will be developed during the detailed design phase when the construction schedule and workforce profile are confirmed. and will provide details of how the Contractor will:

- Identify and evaluate accommodation options for non-local personnel
- Minimise the use of rental housing in potentially impacted communities
- Avoid personnel demands on affordable accommodation such as caravan parks
- Avoid coincidence of any peak workforce accommodation demands with peak tourist and event visitor demands
- Enable local accommodation providers to benefit from Project accommodation arrangements, including hotels whose amenity could be affected during construction
- Monitor personnel demands on the availability and cost of rental housing, affordable accommodation provision and short-term/tourism accommodation in the SIA study area
- Institute corrective action to recruitment, training or accommodation strategies if any pressures on housing access or short-term accommodation availability are identified.

The development of the AMP will include:

- Consulting with CSQ on the results of their labour force analysis
- Updating the housing and accommodation baseline to account for changes in availability or cost since the EIS was completed
- Forecasting the number of non-local personnel who may require accommodation and anticipated number of bed nights by quarter throughout the construction period
- Consulting with ICC, LVRC and DCHDE to identify any issues which will be considered in planning for workforce accommodation
- Consulting with hotels and motels in potentially impacted communities, the Lockyer Valley Tourism Association and the Ipswich Tourism Operators' Network regarding the likely availability of short-term accommodation at the time construction personnel may require accommodation, including identification of average occupancy rates and peak tourist demand periods
- 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
- 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
- Developing an accommodation register identifying acceptable accommodation solutions which may include:
  - Accommodation providers (hotels and motels) in potentially impacted communities



- Other accommodation providers in the Lockyer Valley, Ipswich and Toowoomba LGAs who are interested in providing accommodation
- Preferred accommodation solutions which avoid seasonal and event-related peak demands in each LGA
- Provision of a monitoring framework which will track accommodation use by Project personnel and accommodation availability in the Project region
- Considering the potential accommodation demands of other Inland Rail projects to be constructed in the same timeframe, and ensure a coordinated approach to accommodation management
- Consulting ICC, LVRC and peak tourism associations on the draft AMP
- Finalising the AMP for implementation from the pre-construction period and throughout the construction phase.

ARTC will monitor the implementation and effectiveness of the AMP and may require the contractor to refine their accommodation solutions if adverse impacts on housing and accommodation availability are identified. The results of monitoring will be provided as part of the annual SIMP report.

#### 8.4.6 Action plan

Objectives, outcomes and measures which will support achievement of ARTC’s Accommodation Principles, including consideration of the potential for cumulative impacts on the availability of housing or short-term accommodation, are outlined in Table 8-10.

**Table 8-10 Housing and accommodation**

Housing and accommodation measures	
Objective	<ul style="list-style-type: none"> <li>■ Avoid impacts on access to housing and accommodation in the Project region</li> <li>■ Manage workforce accommodation demands to avoid displacement of tourists from accommodation in the Ipswich and Lockyer Valley LGAs</li> <li>■ Minimise potential for impacts on property values due to impacts on amenity or perceptions about Project impacts</li> <li>■ Accommodation providers in the Project region benefit from any project requirements for workforce accommodation</li> </ul>
Outcomes	<ul style="list-style-type: none"> <li>■ Rental housing vacancy rates are not affected by Project demands</li> <li>■ DTMR tenants who would relocate are supported to find suitable housing</li> <li>■ Access to seasonal workers’ accommodation is maintained</li> <li>■ Tourists and event visitors are not displaced from tourism accommodation due to Project demands</li> <li>■ Inland Rail projects’ cumulative demands for housing and accommodation are monitored, and management measures put in place if cumulative impacts appear likely</li> </ul>
ARTC Commitments	<ul style="list-style-type: none"> <li>■ ARTC will require the contractor to provide an AMP which addresses Inland Rail’s program-wide accommodation principles</li> <li>■ Accommodation solutions contribute social and economic value to potentially impacted communities</li> <li>■ The Project will seek to maximise local employment to limit any demands on housing and accommodation in the Project region</li> <li>■ ARTC will implement its program-wide accommodation principles for the Project</li> <li>■ ARTC will require the Contractor to provide, implement and report on an Accommodation Management Plan</li> </ul>

Housing and accommodation measures	
	<ul style="list-style-type: none"> <li>■ If monitoring data indicates a decrease in rental vacancy rates or the availability of short-term accommodation to tourists in the Project region to which the Project is contributing, ARTC will require refinement of the AMP to minimise negative social impacts to potentially impacted communities</li> <li>■ ARTC will not seek to register new vacant residential lots as part of the Project, and will communicate ICC concerns on this issue to the Constructing Authority</li> </ul>
Measures - detailed design phase	<p><b>Affordable housing access</b></p> <ul style="list-style-type: none"> <li>■ Work with DTMR and DCHDE to develop and implement a joint work program between DTMR/DCHDE and ARTC/the Contractor to support DTMR tenants and landowners who would need to relocate (refer Section 8.4.1)</li> <li>■ Consult with ICC and LVRC to discuss the scope of the AMP and identify any issues which will need to be considered in planning for workforce accommodation</li> <li>■ Require, review and approve the Contractor’s AMP</li> <li>■ Communicate with ICC and LVRC 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</li> </ul> <p><b>Impacts on access to housing or short-term accommodation</b></p> <ul style="list-style-type: none"> <li>■ The contractor will provide an AMP which will include:                             <ul style="list-style-type: none"> <li>– Alignment with ARTC’s program-wide accommodation principles</li> <li>– Identification of the number of personnel who could require short-term accommodation or temporary housing and the duration of need</li> <li>– The results of consultation with Councils, short-term accommodation providers in the Project region and peak tourism associations in the Project region regarding the likely availability of accommodation at the time the construction workforce is planned to commence and peak</li> <li>– Accommodation solutions identified in consultation with ICC, LVRC and tourism networks</li> <li>– Measures to avoid impacts on the availability of rental housing and short-term accommodation including a short-term accommodation register which identifies accommodation options in the Ipswich, Lockyer Valley and Toowoomba LGAs with sufficient capacity and peak occupancy periods (i.e. high tourist periods) and would be developed in consultation with the two Councils and accommodation providers</li> <li>– Measures to avoid impacts on low income households including avoiding use of caravan parks and mobile home parks in the Project region</li> <li>– Measures to enable local accommodation providers to benefit from Project accommodation arrangements</li> <li>– Mechanisms to monitor:                                     <ul style="list-style-type: none"> <li>▶ the number and percentage of the Project’s workforce requiring accommodation</li> <li>▶ the type of accommodation being used</li> <li>▶ the number of people being accommodated in the Project region each month</li> <li>▶ rental vacancy rates in potentially impacted communities</li> <li>▶ any strains on local rental housing stock or short-term accommodation providers’ capacity to service tourists</li> </ul> </li> </ul> </li> </ul>

Housing and accommodation measures	
	<ul style="list-style-type: none"> <li>■ Engage with the Lockyer Hotel and Forest Hill Hotel in Forest Hill, and the Royal Hotel and Commercial Hotel in Gatton, to                             <ul style="list-style-type: none"> <li>– Identify the need for property-specific mitigation measures to minimise noise and dust impacts on amenity and ensure vehicle and pedestrian access to the hotels is maintained during construction.</li> <li>– Identify their capacity to accommodate Project personnel if accommodation is required</li> <li>– Monitor Project demands to ensure the hotels’ tourist trade is not crowded out by workforce demands</li> </ul> </li> </ul> <p><b>Property values</b></p> <ul style="list-style-type: none"> <li>■ Consider landowners’ feedback regarding mitigation of impacts on properties in the development of the detailed design and CEMP</li> <li>■ Compensation for acquisition of legal interests in property will be provided in accordance with the AL Act</li> <li>■ Provide early advice and sufficient detail about volumetric tenure and tunnelling works to landowners with properties directly above the Little Liverpool Range tunnel, and establish communication between them and the Contractor when necessary</li> </ul> <p><b>Seasonal workers’ accommodation</b></p> <ul style="list-style-type: none"> <li>■ Engage with the Gatton Caravan Park’s owner and manager to discuss the detailed design, impacts on the caravan park and mitigation measures, and confirm the schedule for implementation of agreed management measures to address:                             <ul style="list-style-type: none"> <li>– Noise e.g. through temporary hoardings, and locating noisy plant and car parking areas as far as possible from the accommodation units</li> <li>– Dust e.g. additional dust suppression measures if dust generation is affecting the caravan park</li> <li>– Impacts on scenic amenity e.g. using hoardings to screen construction works from the park, or landscaping</li> <li>– Pedestrian and cycle access e.g. through creation of a temporary pathway during construction</li> <li>– Vehicle access e.g. through relocating the park’s entry</li> <li>– Design for transmission noise control (if required and agreed) to reduce operational noise impacts on the caravan park</li> <li>– Land acquisition which could decrease the park’s capacity</li> </ul> </li> <li>■ Confirm management measures which will avoid or minimise impacts on affordable accommodation capacity within Gatton Caravan Park for commencement where possible during the detailed design phase</li> <li>■ Consult with the owner of the Homestyle Lodge in Gatton to identify any mitigation measures required in respect to potential noise exceedances during operation</li> </ul>
Measures - pre-construction phase	<p><b>Housing and accommodation access</b></p> <ul style="list-style-type: none"> <li>■ The Contractor will implement the AMP as relevant to the pre-construction phase</li> <li>■ The Contractor will review and, if necessary, update the number of non-local personnel that are expected to be required over the duration of the construction period</li> <li>■ The AMP will include monitoring mechanisms to identify any strains on local rental housing stock, including consultation with Council, and short-term accommodation providers’ capacity to service tourists, as indicated by consultation with local tourism associations</li> </ul>

Housing and accommodation measures	
	<ul style="list-style-type: none"> <li>■ ARTC will monitor the implementation of the AMP and report on the outcomes to ARTC quarterly</li> <li>■ 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</li> </ul> <p><b>Seasonal workers' accommodation</b></p> <ul style="list-style-type: none"> <li>■ Implement mitigation measures to reduce construction impacts on Gatton Caravan Park and potential construction noise exceedances on the Homestyle Lodge, as relevant to the pre-construction phase</li> <li>■ If partial acquisition within the Gatton Caravan Park is confirmed, progress implementation of measures (e.g. land swap to allow park expansion, reconfiguration and redevelopment of the Caravan Park to increase capacity, or partnership with alternative providers) to minimise the loss of capacity of affordable accommodation</li> <li>■ If it is agreed that full acquisition of the Gatton Caravan Park is required:                         <ul style="list-style-type: none"> <li>– Cooperate with the caravan park's owner to identify alternative sites for the caravan park in the Gatton area or nearby</li> <li>– Provide information to nearby businesses which may be dependent on park visitors' trade (e.g. the laundromat, bike repair shop and the BP service station) regarding the timing and extent of any reduction in capacity or loss of the caravan park</li> <li>– Provide information to enable alternative accommodation providers (e.g. Grantham Farmworkers Lodge) to progress expansion plans, at the discretion of the relevant accommodation providers</li> <li>– Provide information to farms and agribusinesses regarding any loss of accommodation within the caravan park, and accommodation alternatives for seasonal workers</li> <li>– Initiate measures (e.g. land swap to enable relocation of the caravan park or partnership with short-term accommodation providers) to mitigate the loss of affordable accommodation</li> </ul> </li> </ul> <p><b>Property values</b></p> <ul style="list-style-type: none"> <li>■ Cooperate with landowners (as per Section 8.2.7) to reduce impacts on the amenity of directly affected and adjacent properties</li> <li>■ Communicate ARTC's commitments to environmental management, and EIS approval conditions, to local and regional community members, to reduce the likelihood of negative perceptions about the amenity of properties in or near the EIS investigation corridor</li> </ul> <p><b>Avoid creation of new lots</b></p> <ul style="list-style-type: none"> <li>■ In finalising property acquisition and subdivision arrangements, ARTC will not seek to register new residential lots</li> </ul>
Measures - construction phase	<p><b>Housing and accommodation availability</b></p> <ul style="list-style-type: none"> <li>■ The Contractor will implement the AMP, which will include:                         <ul style="list-style-type: none"> <li>– Minimising the use of rental housing in potentially impacted communities</li> <li>– Monitoring the number of people being accommodated in the Project region each month and the type of accommodation being used</li> <li>– Monitoring cumulative demands on short-term accommodation to avoid displacing visitors to major events or during seasonal peaks, including consultation with accommodation providers and Councils</li> <li>– Avoiding use of caravan parks and mobile home parks in the Project region</li> </ul> </li> </ul>

Housing and accommodation measures
<ul style="list-style-type: none"> <li>■ ARTC will monitor the implementation and outcomes of the AMP to identify any strains on:                             <ul style="list-style-type: none"> <li>– Local rental housing stock (as indicated by trends in rental vacancy rates in the relevant postcodes)</li> <li>– Short-term accommodation providers’ capacity to service tourists, as indicated by consultation with local tourism associations</li> </ul> </li> <li>■ ARTC will monitor the cumulative accommodation/housing demands of Inland Rail projects. If any strains on rental housing availability or short-term accommodation are identified, ARTC will work with the Contractor to refine the AMP</li> <li>■ The delivery and outcomes of the AMP will be reported as part of the Project’s SIMP reports</li> </ul> <p><b>Seasonal workers’ accommodation</b></p> <ul style="list-style-type: none"> <li>■ Implement mitigation measures to reduce construction impacts on Gatton Caravan Park and potential construction noise exceedances on the Homestyle Lodge</li> <li>■ Implement measures identified as necessary during the construction phase to maintain the availability of seasonal worker accommodation in the Lockyer Valley</li> <li>■ Implement the noise mitigation measures agreed with respect to operational noise with respect to Gatton Caravan Park</li> </ul>

## 8.5 Health and community wellbeing

EIS Chapter 23: Draft Outline Environmental Management Plan outlines the Project’s management measures to prevent impacts on community health as a result of environmental changes. This section outlines the Project’s mitigation measures relating to mental health, community wellbeing, the potential for impacts on schools, community facilities, and health and emergency services, and community safety. Potential impacts on health or community wellbeing are summarised below, and measures to mitigate impacts are provided in Table 8-11.

### 8.5.1 Mental health

The Project’s EIS period has involved stress and anxiety for some local residents, due to concerns about property acquisitions, potential impacts on amenity or environmental changes which could result from the Project. Stress is likely to be ongoing for directly affected landowners during the acquisition process, and fears about construction 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.

During the detailed design period, ARTC will continue to engage with landowners whose properties would be directly affected, residents whose properties are adjacent to the disturbance footprint and the owners of all properties which could experience noise or vibration exceedances during construction. The results of this engagement will inform:

- Communication with the Constructing Authority regarding landowners’ circumstances
- Development of the CEMP
- Partnership discussions with the PHNs with respect to mental health services’ adequacy.

Inland Rail has developed mental health partnerships with the Darling Downs and West Moreton 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 and 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 and Lives Lived Well 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. 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.

Along with stakeholder engagement processes outlined in Section 8.2, and the range of management strategies and recommendations in regard to managing environmental changes which are outlined in EIS Chapter 23: Draft Outline Environmental Management Plan , further measures are outlined in Table 8-11 to reduce the potential for community members to feel stressed or anxious about Project impacts.

### **8.5.2 Environmental health**

During construction, the Project will introduce noise, vibration and dust sources to rural and urban environments, with associated social impacts as detailed in Section 7.1. Assessment of air quality has predicted that the Project could be constructed and operated without affecting human health.

The Project's operation may result in noise exposure for nearby properties. Measures to mitigate potential triggers are provided in EIS Chapter 23: Draft Outline Environmental Management Plan.

ARTC will engage with local stakeholders including LVRC, ICC, Queensland Health, landowners, community groups and local service providers, to identify community initiatives and cooperative actions to be delivered as part of the Community Wellbeing Plan (refer Section 8.5.3). During construction, ARTC will continue to engage with these stakeholders to enable them to participate in tracking the SIMP's outcomes, and where required, develop adaptive management measures to address emerging or changing needs.

### **8.5.3 Community wellbeing**

The SIA has 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 7.1.10). Whilst mitigation measures outlined in the draft Outline EMP are expected to reduce the potential for exceedances of noise and air quality criteria, noise and dust may cause nuisance to residents and businesses and effect their enjoyment of their environment.



During operations, the Project's infrastructure and rail operations will result in potential for rail noise to affect local amenity, short traffic delays at level crossings, and changes to the rural landscape which may affect sense of place. The Project's operation also presents the potential for rail accidents, road-rail or rail-pedestrian accidents or suicides.

These impacts could individually or collectively affect the wellbeing or quality of life of residents in potentially impacted communities.

The Project will contribute to Inland Rail's social and economic benefits including employment opportunities and local business participation in the supply chain.

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 the 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 LVRC, ICC, PHNs, DCHDE, 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
- 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
- Providing funding through partnerships with LVRC and ICC for initiatives which strengthen sense of place e.g. park development or streetscape improvements
- 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 will 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.

#### **8.5.4 Schools, community facilities and services**

The Project's construction will impact on the amenity of community facilities including schools, churches, community halls and parks, with the most significant impacts likely in Gatton, Forest Hill and Grandchester. In particular, a number of facilities would experience construction noise exceedances and disruptions to traffic and pedestrian access (refer Section 7.4.1). Whilst noise mitigation measures provided in EIS Chapter 23: Draft Outline EMP are expected to avoid exceedances of operational noise criteria, construction noise may still be experienced as a detraction to the amenity of schools and community facilities. There is also potential for construction activities to affect war memorials' days of commemoration.

ARTC will consult with the managing authorities of each facility where noise exceedances may be experienced during construction or operation or both, to share information about potential noise impacts, and identify site-specific mitigation where triggered by exceedances of noise levels, and/or where facility managers identify impacts on facilities' functions or accessibility as the result of construction activities. This will include consultation with LVRC, ICC, Education Queensland and Queensland Health as described in Section 7.4.1.

ARTC has commenced engagement with the Department of Education regarding their Learning Environment Policy and the potential for construction noise exceedances to affect schools. Based on the detailed design, the Project will consult with the Department of Education, UQ, school principals and childcare centre owners regarding the potential for construction noise exceedances and agree the mitigation required to avoid noise impacts on the following education facilities:

- In Gatton, Peace Lutheran Primary School, Our Lady of Good Council School, Peace Lutheran Primary School, Lockyer District High School, Gatton State School, Goodstart Early Learning Gatton, Lockyer Valley Early Education Centre, Groove and Move Dance School
- In Laws, the UQ Gatton Campus
- Forest Hill State School
- In Laidley Little Angels (childcare centre), Laidley District State School and Laidley District High School
- Grandchester State School.

The Department of Education and schools identified above will also be consulted during the detailed design phase to identify the need for any further measures regarding pedestrian connectivity, traffic safety or amenity impacts relating to the Project, to enable consideration of schools' specific requirements in the detailed design and CEMP. ARTC will also consult with the principals of private schools where noise criteria may be exceeded on the basis of the detailed design to explain any potential for construction noise and identify any specific management measures which need to be considered in the CEMP.

Potential impacts on the Grandchester State School during construction will need careful mitigation strategies developed in cooperation with the Department of Education, as impacts may include construction noise, the existence of a large laydown area located 200 m from the school, potential for heavy haulage vehicles to use Grandchester-Mount Mort Road, and disruption of access to the School Road Reserve including severance of a pedestrian route between the town centre and school. There is also potential for operational noise to affect the Grandchester State School. ARTC will continue to consult with the Department of Education to ensure impacts on the school are managed in accordance with the Department's Learning Environment Policy, and that impacts on the surrounding road network and access to parks are minimised wherever possible. Engagement with the Department of Education will also encompass the potential for rail noise to exceed internal noise goals at the Forest Hill State School.

The Project will also consult the Department of Education about the planned locations of future school sites (as known) to identify the need for any cooperation between the Department and the Project with respect to specific mitigation measures to avoid impacts on future school sites, e.g. maintenance of pedestrian and vehicle access to known school sites.

The Project's CEMP and TMP will have regard to the location of community facilities and school bus routes, and will include specific measures to mitigate construction noise impacts on schools, churches and community facilities as identified in Section 7.4.1. The TMP and road use management plan (RUMP) will also have regard to the location of access routes to schools and early learning centres (e.g. Gaul Street and William St in Gatton, Grandchester-Mount Mort Road in Grandchester and Victoria Street in Forest Hill) which would be affected by the Project footprint and/or construction traffic, and include measures such as restricting construction activities and construction traffic on these routes during peak school pick-up and drop-off times. Traffic control measures (such as supervised crossings) may also be determined as required in consultation with the Department of Education based on the Project's detailed design.

The Project will result in the acquisition of Apex Park in Gatton, and severance of the School Road Reserve in Grandchester, which is likely to require offsets for the loss of park land and may cause a loss of community amenity through the use of these public spaces.

Land acquisition is required within the Gatton Golf Club and an interface agreement is being developed with the Golf Club including compensation for the loss of land and requirement to replace a tee area and one golf hole. An opportunity to secure additional surface water storage for the Golf Club as part of the Project was identified and will be considered as part of the detailed design process.

The detailed design will also include consideration of the Gatton Bowls' Club's access requirements (i.e. provision of alternative road access arrangements if required, and provision of alternative parking spaces if the QR land was no longer available).

ARTC is also working with the Christian Life Centre Church to explore options to allow the parish to continue operation.

During operation, the Project could result in ongoing noise exposure for community facilities triggering an investigation of noise mitigation for the Christian Life Centre and New Hope Church in Gatton, Forest Hill State School, Laidley Baptist Church, Grandchester State School and St Peter's Catholic Church, Grandchester.

Further consultation will also be undertaken with the following to identify any refinements to measures required as part of the CEMP or TMP:

- Salvation Army Lockyer Valley Corps, regarding the potential for amenity or access impacts on their facilities in Laidley and the need for any mitigation measures to ensure their services remain accessible
- Gatton Show Society, to minimise any impacts on access to the Showgrounds

- LVRC, regarding preservation of access to the Helidon to Ravensborne Trail
- The Returned and Services League (RSL) to identify the need for any measures such as suspending noisy construction activities during Anzac Day and Remembrance Day commemoration 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 8.1.5, ARTC is currently providing funding, through a partnerships with the Darling Downs and West Moreton PHN, to the Richmond Fellowship and Lifeline's Community Connections program to assist residents to cope with stress, anxiety and support community resilience (refer Section 7.4.3). The Project will also consult with DCHDE to identify any existing service shortfalls and monitor any increases in service demands resulting from the Project, to enable cooperative solutions to address any strain on services resulting from the Project.

ARTC will initiate partnerships ICC in respect to Grandchester as described in Section 8.2.3 to identify and implement modifications to Council-owned community facilities to reduce the impacts of noise and access changes, plan for offsets for the loss of Council parkland and provide support for local facility upgrades e.g. improved access to and quality of parks and community facilities

During the construction phase, the Project will provide funding to local community organisations to provide community support and development programs which will assist residents in potentially impacted communities to build their resilience to change and support the growth of social networks. Organisations to be funded will be identified through consultation with DCHDE, Darling Downs and West Moreton PHN, LVRC and ICC, and/or through an expression of interest process.

ARTC will continue to engage with these stakeholders during construction to:

- Implement the initiatives identified
- Enable stakeholders to participate in tracking the SIMP's outcomes
- Where required, develop adaptive management measures to address emerging or changing needs.

ARTC has established the Inland Rail Community Sponsorships and Donations Program. The purpose of the program is to support non-profit organisations, community groups, Traditional Owner groups, and local government entities with projects, events, and activities that will help achieve community and regional prosperity and sustainability. Eligible groups can apply for amounts between \$1,000 and \$4,000 for one-off, short-term projects or activities with a focus on the priority areas of culture, safety, environment, recreation and entrepreneurship.

### **8.5.5 Health and emergency services**

Whilst changes to the SIA study area's population as the result of Project construction or operation are not expected, there is potential for an increase in demand for emergency and health services, and for temporary delays to emergency service vehicles during construction, as discussed in Section 7.4.3.

The Project will provide workforce ramp-up estimates and close cooperation to the QPS, QAS, QFES, DCHDE and Queensland Health to assist with their planning.

ARTC will consult with the Darling Downs West Moreton HHS in the detailed design phase to plan for anticipated health service needs. To avoid placing additional demand on local health services, the Project will also employ paramedics to service key construction sites.

There is also potential to affect emergency response times (particularly for QAS) due to traffic delays whilst trains are passing level crossings. construction, and during construction and operation, and QPS has highlighted the potential for protests or disputes about the Project to strain the capacity of their services. ARTC will undertake consultation with QPS, QAS, QFES and local Disaster Management coordinators, to agree cooperative arrangements for emergency management and disaster responses and mitigate impacts on service capacity. This will include:

- Orientation of Police and emergency services to the Project and key sites early in the construction process, and after completion to aid efficiency in emergency response
- Agreement of responsibilities and protocols for emergency responses during construction
- Confirming access requirements and provisions for emergency service helicopters along the alignment
- Prior advice on oversized vehicle movements, escort requirements, road closures, traffic detours and the potential for community protests
- Consultation regarding any refinements to dangerous goods management measures in the local context
- Development of joint arrangements for responses to Project-related demands on services and site-specific requirements e.g. for fire management access
- Cooperation to plan ahead for management protocols, joint training and capacity building exercises for the operational phase.

#### **8.5.6 Community safety**

As noted in Section 7.2.5, there is the potential for residents to feel concern about a loss of privacy or community safety due to the presence of Project personnel in local communities or near homes, which has been addressed in Section 8.3. ARTC will take a proactive approach by requiring the Contractor to provide best practice management of safety risks to workers and the public.

The Contractor will implement the hazard and risk measures provided in EIS Chapter 23: Draft Outline Environmental Management Plan. The development of these 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.

The potential for impacts on traffic safety has been addressed in detail in EIS Appendix U: Traffic impact assessment technical report, including the development of RUMPs and a TMP for the Project, in consultation with stakeholders including DTMR, ICC, LVRC, and with the Department of Education with respect to school bus routes and construction traffic routes. A consistent approach to traffic management planning and road safety will be required for adjoining Inland Rail projects.

During the construction phase, the Contractor will implement communication strategies to ensure stakeholders know about construction sites and traffic routes, peak construction periods, the Project's workforce conduct policies, and how to contact the Project staff in the event of any concerns.

Prior to the commencement of operations, ARTC and/or the Contractor will develop and implement traffic and rail safety education programs as noted in Table 8-11.

The Project’s operation also presents the potential for rail accidents, road-rail or rail-pedestrian accidents or suicides. 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. During operations, the Project will adhere to ARTC *Emergency Management Plan*, which provides a work procedure for managing recovery from an investigation of emergency requiring significant and coordinated responses on the ARTC network. ARTC is also establishing arrangements with QPS, QAS and QFES to enable cooperative responses to any incidents.

**8.5.7 Action plan**

Table 8-11 provides the objectives, outcomes, ARTC commitments and management measures to mitigate impacts on community health and wellbeing during the Project’s detailed design, pre-construction and construction phases.

**Table 8-11 Health and wellbeing**

Health and wellbeing measures	
<b>Objectives</b>	<ul style="list-style-type: none"> <li>■ Avoid and minimise impacts which may affect community wellbeing including mental health</li> <li>■ Mitigate potential impacts on health and emergency services</li> <li>■ Mitigate impacts on the amenity of schools, community facilities and parks</li> </ul>
<b>Outcomes</b>	<ul style="list-style-type: none"> <li>■ Changes in the amenity of residential properties and community facilities and the potential for noise to disturb sleep are minimised in accordance with the Project’s approval conditions and where relevant, agreements with affected property owners</li> <li>■ Vulnerable residents who need to relocate are supported to adapt to changes</li> <li>■ 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</li> <li>■ Impacts on the amenity of community facilities are minimised</li> <li>■ Provision of information on workforce ramp-up and the construction program enables Government agencies to plan for increased demands for health, police and emergency services</li> <li>■ The wellbeing of residents in the Project region is supported by access to community programs and events which enable community participation and Project cooperation in initiatives to support community wellbeing</li> </ul>
<b>ARTC Commitments</b>	<ul style="list-style-type: none"> <li>■ Maintain a focus on creating a safe environment for all and supporting community wellbeing during the changes that Inland Rail will bring</li> <li>■ Identify impacts and opportunities that have the potential to impact community wellbeing and, in consultation with the local community, develop appropriate programs or initiatives to address these impacts and opportunities</li> <li>■ Implement ARTC’s Community Sponsorship and Donation Program</li> <li>■ Identify opportunities and develop programs to improve safety outcomes for local communities</li> <li>■ Continue a mental health partnership with an appropriate provider at a program level, which will include a tailored focus on potentially impacted communities</li> <li>■ Ensure ongoing engagement with Indigenous communities, families and Elders to support Indigenous employees, underpinned by a high level of coordination between contributing programs and agencies</li> </ul>



Health and wellbeing measures	
<b>Measures - detailed design phase</b>	<p><b>Mental health</b></p> <ul style="list-style-type: none"> <li>■ In cooperation with Yuggera Ugarapul People, conduct cultural awareness tours for Project teams to build awareness and knowledge of cultural significant aspects of the local area</li> <li>■ Ensure a detailed focus on protecting residents' amenity in the Project's CEMP, referencing property-specific interface agreements and draft Outline EMP and SIMP recommendations where relevant</li> <li>■ Provide community liaison staff to:                             <ul style="list-style-type: none"> <li>– Develop partnerships with DTMR/DCHDE and/or community organisations who can assist displaced residents to access alternative accommodation and support services</li> <li>– Work with residents whose properties would be acquired to provide Project information, ensure their concerns are considered in Project planning, and provide referral to support services where required</li> <li>– Identify households where environmental changes, property severance or other impacts may cause distress to residents, ensure their access to communication and complaints mechanisms, and provide referral to support services where required</li> <li>– Ensure a coordinated response between ARTC, Queensland Health and local health service providers in relation to mental health issues in potentially impacted communities</li> </ul> </li> </ul> <p><b>Community wellbeing</b></p> <ul style="list-style-type: none"> <li>■ Consult with DCHDE to identify any Project-related stresses on local services, to enable a cooperative response to Project-related community needs between DCHDE, ARTC and community organisations</li> <li>■ Develop a Community Wellbeing Plan in consultation with LVRC, ICC, DCHDE, PHNs and Queensland Health (refer Section 8.5.2)</li> <li>■ Conduct meetings or workshops with community organisations and outreach services based in Ipswich, Toowoomba and Lockyer Valley regarding:                             <ul style="list-style-type: none"> <li>– Changes to the road network and amenity of community facilities during construction</li> <li>– Measures to support increased service capacity if consultations with community organisations and DCHDE indicates Project-related demands or Project impacts are impacting on service capacity</li> <li>– Community investment priorities and initiatives</li> </ul> </li> <li>■ Develop an incident notification and reporting process, including providing information to the community</li> </ul> <p><b>Community facilities</b></p> <ul style="list-style-type: none"> <li>■ Engage with Department of Education , school principals (public and private) and P&amp;Cs in Calvert, Gatton, Forest Hill, Grandchester and Laidley to:                             <ul style="list-style-type: none"> <li>– Explain the EIS findings and identify any concerns regarding changes to bus routes, pedestrian routes, construction traffic routes, road access or the amenity of schools and grounds</li> <li>– Outline the construction schedule and the nature of road-rail interface treatments</li> <li>– Confirm all relevant school bus services and contact details for their operators, in order to provide appropriate information to school bus operators to allow them to minimise bus timetable disruptions and potentially improve coordination of timetables</li> <li>– Identify any specific considerations (e.g. off-campus activities) to will be considered in the Project's CEMP</li> </ul> </li> </ul>

Health and wellbeing measures	
	<ul style="list-style-type: none"> <li>– Identify traffic and pedestrian safety measures including provision of a safe pedestrian access between the town of Grandchester and the school and management measures applying to construction traffic</li> <li>– Refine the CEMP, RUMP and TMP provisions as relevant to schools and school bus routes e.g. avoidance of school access routes during peak transport/drop off/pick up periods</li> <li>– Identify the location of planned new schools which may need to be consideration in the CEMP</li> <li>■ Engage with Department of Education to agree mitigation measures (e.g. mechanical ventilation and/or or fencing upgrades) to avoid operational noise exceedances at the Forest Hill State School and Grandchester State School</li> <li>■ Engage with the LVRC, ICC and the owners/managers of all community facilities (e.g. churches, childcare centres, aged and disability services and recreational facilities) identified in Section 7.4.1 and 7.4.4 to:                         <ul style="list-style-type: none"> <li>– Explain the EIS findings on construction and operational noise and seek facility managers’ feedback on how noise or access disruptions could affect facility operations</li> <li>– Identify facilities’ specific needs (e.g. Department of Education and Queensland Health policies and guidelines, church service and memorial event times when impacts need to be minimised and community events schedules)</li> <li>– Identify any feasible measures which will reduce the impacts of construction noise or impediments to car/pedestrian access</li> <li>– Identify community facility upgrades which ARTC could support to offset impacts on amenity and access during the construction phase</li> <li>– Plan for the implementation of mitigation measures for noise and access impacts during the pre-construction and construction phases</li> </ul> </li> <li>■ Investigate the opportunity to secure additional surface water storage for the Golf Club as part of the Project’s detailed design</li> <li>■ Include consideration of the Gatton Bowls’ Club’s access requirements as part of the detailed design i.e. provision of alternative road access arrangements if required, and provision of alternative parking spaces if the QR land was no longer available.</li> </ul> <p><b>Health and emergency services</b></p> <ul style="list-style-type: none"> <li>■ Advise the Darling Downs West Moreton HHS regarding the workforce ramp-up to enable them to plan for any anticipated changes to health service needs</li> <li>■ Consult with Darling Downs West Moreton HHS regarding any specific traffic management measures required to minimise the potential for traffic congestion to affect Gatton Hospital’s access e.g. minimising Project traffic in town during school drop-off and pick up times</li> <li>■ Engage with QPS, QAS QFES, Lockyer Valley and Ipswich SES Disaster Management coordinators to enable cooperation including:                         <ul style="list-style-type: none"> <li>– Consultation on the Project’s emergency response plan and procedures</li> <li>– Development of emergency response protocols</li> <li>– Provision of information about dangerous goods transport e.g. in the rail tunnel</li> <li>– Planning for orientation of QPS, QAS and QFES personnel to the Project and key construction sites</li> <li>– Development of measures which mitigate impacts on emergency service response times during construction and operation</li> </ul> </li> </ul>

Health and wellbeing measures	
	<ul style="list-style-type: none"> <li>– Confirm cooperative response to any fire risks affecting the EIS investigation corridor</li> <li>– Ensure access routes are communicated and agreed, including alternative routes during extreme events such as during flooding or bushfires</li> </ul>
<b>Measures - pre-construction phase</b>	<p><b>Mental health</b></p> <ul style="list-style-type: none"> <li>■ Implement actions agreed in property acquisition and access arrangements</li> <li>■ Consult with landowners and residents who may experience construction noise exceedances to confirm mitigation</li> <li>■ Fund provision of locally-based community development programs to work with residents in and near the EIS investigation corridor and in potentially impacted communities, to:                             <ul style="list-style-type: none"> <li>– Build their capacity to cope with Project-related changes to connectivity, sense of place or community cohesion.</li> <li>– Position local businesses to participate in the Project’s supply chain</li> <li>– Identify and implement community events, activities, networks and services</li> </ul> </li> <li>■ To reduce anxieties about flood risks, ARTC will:                             <ul style="list-style-type: none"> <li>– Continue to work with landowners concerned with hydrology and flooding throughout the detailed design, construction and operational phases of the Project</li> <li>– Continue to work with directly impacted landowners affected by the alignment throughout the detailed design, construction and operational phases of the Project</li> <li>– Continue to work with local Councils, and State departments with responsibility for flood prevention and management.</li> </ul> </li> </ul> <p><b>Community wellbeing</b></p> <ul style="list-style-type: none"> <li>■ Implement the Community Wellbeing Plan as relevant to the pre-construction phase</li> </ul> <p><b>Community facilities and services</b></p> <ul style="list-style-type: none"> <li>■ Implement mitigation measures agreed with community facilities’ managing authorities during the pre-construction phase</li> <li>■ Update advice on workforce ramp-up to QPS, QAS, QFES and Queensland Health</li> <li>■ Consult with DCHDE to identify any existing service shortfalls and monitor any increases in service demands resulting from the Project, to enable cooperative solutions to address any strain on services resulting from the Project</li> <li>■ Implement the partnerships and initiatives agreed with LVRC, ICC and local communities during the detailed design phase, as relevant to the pre-construction phase, including:                             <ul style="list-style-type: none"> <li>– Modifications and/or enhancements to community facilities/parks</li> <li>– Initiatives to reduce or offset impacts on the character and amenity of local towns</li> </ul> </li> <li>■ Promote the Inland Rail Community Sponsorships and Donations Program to local communities</li> </ul> <p><b>Community safety</b></p> <ul style="list-style-type: none"> <li>■ Continue to work with landowners concerned with hydrology and flooding, local Councils, State departments and local flood specialists in the development of flood mitigation design and/or management measures</li> <li>■ Engage with the Lockyer Multicultural Association regarding any need to translate or otherwise directly communicate ARTC’s safety information to residents with low English proficiency, and/or or short-term residents with a lack of familiarity with rail networks</li> <li>■ Ensure safety awareness program provides clear and appropriate information about rail, pedestrian and cycle safety to children, young people, people with disability, people without internet access and people with limited or no English skills</li> </ul>

Health and wellbeing measures	
	<ul style="list-style-type: none"> <li>■ Maintain regular engagement with the Department of Education and all schools in Calvert, Gatton, Forest Hill, Grandchester and Laidley to provide updates on the construction schedule and roadworks, and confirm Project contact details for the construction period</li> <li>■ Commence implementation of communication strategies to:                             <ul style="list-style-type: none"> <li>- Ensure stakeholders know about the Project’s construction traffic routes and the location of Project construction sites where traffic delays may occur</li> <li>- Communicate the Project’s road safety management measures</li> <li>- Promote safe driving behaviour</li> <li>- Promote the Project’s workforce conduct policies, and how to contact the Project staff in the event of any concern</li> </ul> </li> <li>■ Require the Contractor to ensure that specific advice is provided to construction personnel and transport operators regarding roads to be used, the standard of driving behaviour required, fatigue management, and the sanctions for driving behaviour that is not in accordance with the Project’s standards in the Workforce Code of Conduct</li> </ul> <p><b>Health and emergency services</b></p> <ul style="list-style-type: none"> <li>■ Provide early advice to Queensland Health, QPS, QAS and QFES on the Project’s workforce ramp-up and offer site orientation for local police</li> <li>■ Require contractors to have adequately trained first aid/paramedic staff to assist in the promotion of workplace health, wellness and safety, and treatment of personnel’s minor injuries and health issues</li> <li>■ Maintain engagement and cooperative measures as agreed during the detailed design/pre-construction phases</li> </ul>
<b>Measures – construction phase</b>	<p><b>Mental health</b></p> <ul style="list-style-type: none"> <li>■ Provide timely information about environmental changes such as demolition of dwellings within the EIS investigation corridor, road re-alignments and activities which will cause noise</li> <li>■ Provide additional support for mental health services if the PHN identifies Project-related need for increased mental health services</li> <li>■ Fund provision of agreed community development programs to address impacts on community facilities</li> <li>■ Implement partnerships with ICC and LVRC (refer Sections 8.5.3 and 8.5.4)</li> <li>■ Provide support for provision of increased mental health services if the Darling Downs and West Moreton PHN identifies the need in relation to Project impacts</li> </ul> <p><b>Community wellbeing</b></p> <ul style="list-style-type: none"> <li>■ Provide support for Lifeline’s Community Connection program to help build community cohesion and resilience, for a term agreed with the PHNs and Lifeline</li> <li>■ Implement the Community Wellbeing Plan</li> <li>■ Monitor the implementation and effectiveness of the Community Wellbeing Plan</li> <li>■ Review and where necessary revise measures included in the Community Wellbeing Plan in response to monitoring of its effectiveness, which will include consultation with ICC, LVRC, PHNs and the Project’s CRG</li> </ul> <p><b>Community facilities and services</b></p> <ul style="list-style-type: none"> <li>■ Implement mitigation agreed with community facilities’ managing authorities</li> <li>■ Update advice on workforce ramp-up to QPS, QAS, QFES and Queensland Health</li> <li>■ Promote the Inland Rail Community Sponsorships and Donations Program to local communities</li> <li>■ Consult with DCHDE on an annual basis to identify any Project-related stresses on local services, to enable a cooperative response to Project-related community needs between DCHDE, ARTC and community organisations</li> </ul>

Health and wellbeing measures	
	<ul style="list-style-type: none"> <li>■ Maintain support for community or government organisations that are providing support services for directly affected households</li> </ul> <p><b>Health and emergency services</b></p> <ul style="list-style-type: none"> <li>■ Employ paramedics to service Project construction sites</li> <li>■ Hold regular meetings with Queensland Health, QPS, QAS and QFES services to update advice on the Project’s workforce ramp-up, review cooperative arrangements, provide advice on major equipment movements, and ensure any safety or service access issues are identified and addressed</li> <li>■ Develop a protocol between ARTC/Contractor and emergency service providers, defining appropriate and coordinated responses and communication in the event of emergencies during operations</li> <li>■ Provide regular notifications to QPS, QAS, QFES and SES of changes to the road network and of construction activities prior to construction commencing Develop joint training and response exercises with QPS, QAS and QFES to build capacity for Project-associated incident management</li> </ul> <p><b>Community safety</b></p> <ul style="list-style-type: none"> <li>■ Implement workforce fatigue management procedures including in relation to travel</li> <li>■ 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 during construction</li> <li>■ 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)</li> <li>■ Monitor the Contractor’s implementation of the Workforce Code of Conduct and require revisions to workforce management measures if community complaints identify any safety or noise issues related to Project personnel</li> <li>■ Ensure safety awareness program provides clear and appropriate information about rail, pedestrian and cycle safety to children, young people, people with disability, people without internet access and people with limited or no English skills</li> <li>■ Implement an Operations Communication and Education Plan prior to the commencement of operations to provide information about Inland Rail operations and safety. This will include general community information and education, and targeted rail and road safety programs for delivery to:                         <ul style="list-style-type: none"> <li>– Local schools and childcare centres</li> <li>– UQ Gatton Campus</li> <li>– Seasonal workers</li> <li>– Seniors and people with disability</li> <li>– Communities in the SIA study area.</li> </ul> </li> </ul>

## 8.6 Local business and industry participation

This section addresses impacts on farms and other businesses, including the potential for impacts on tourism, and describes ARTC’s commitments to ensuring that local and regional businesses benefit from the Project.

### 8.6.1 Impacts on farms and agribusiness

ARTC has conducted consultation with landowners to identify the potential for impacts on farms and other agricultural uses, and where possible has designed the Project alignment to avoid impacts on productive land and high value infrastructure. Landowners will be compensated for the loss of legal interests in land.

Impacts on farms and grazing properties may include disruption to property access, reduction in the usable areas of land, impacts on bores, or severance of movement patterns for stock, equipment and water. ARTC is working with directly affected landowners to address their property-specific concerns as part of the detailed design phase and in finalising the Outline EMP and developing the guidelines for the CEMP. This will include working with farm owners and business operators to reduce the potential for impacts on properties' direct access to the road network and across the rail corridor.

ARTC's Inland Rail Skills Academy will include provision for training and skills development programs which are relevant to the agricultural industry. Longer term, local agribusinesses may have access to better rail-road transport connections for the movement of produce, and through improvements to connectivity opportunities between the existing West Moreton System rail corridor and ARTC interstate lines.

### 8.6.2 Town centre businesses

The Project has the potential to negatively affect the amenity and accessibility of businesses in Gatton and Forest Hill during the construction period. The closure of Gaul Street in Gatton would remove a direct link to William Street in the town centre, and changes to the road network in Forest Hill may result in reduced traffic on Victoria Road in Forest Hill, potentially leading to decreased trade for town centre businesses.

The combined effects of construction noise, dust and traffic disruption in Forest Hill and Gatton may deter people from going to town and bypass the towns for other centres. Construction noise or traffic may also affect the amenity of businesses in Helidon and Laidley.

ARTC will actively encourage businesses in all potentially impacted communities to access the EIS and will meet with businesses in Gatton and Forest Hill to discuss potential noise, character, dust and traffic impacts in town centres. This will include one-on-one consultation with each business where noise exceedances would be experienced to assist in designing property-specific noise mitigation measures.

The results of the consultation with businesses will inform:

- Development of the CEMP and TMP during the detailed design phase
- Detailed measures to be implemented in co-operation with businesses including:
  - Signage to ensure residents and visitors know how to move safely around town whilst construction works are occurring
  - The design of pedestrian and cycle access paths
  - Promotional strategies to offset loss of business trade due to roadworks and/or noise impacts.

Impacts would be managed through the CEMP during construction and through the application of operational management standards during operations, supported by community engagement during construction and operation. ARTC will require the Contractor when appointed to consult with each business that is adjacent to the footprint to take account of their specific needs, including consideration of the needs of transport-related operations, agricultural operations and town-based businesses are considered in the detailed design, CEMP and TMP.



Consultation with the LVRC and local businesses will be undertaken as part of the detailed design process, to obtain input which will assist in refining mitigation measures. ARTC will also collaborate with the Lockyer Valley Chamber of Commerce and interested businesses to develop and fund marketing or business capacity development strategies.

Of note, businesses such as cafes and hotels support the Lockyer Valley's tourism trade, so deterrence of customers and visitors to local businesses may also affect trade for tourism businesses. Potential impacts on tourism businesses are further discussed below.

It is also likely that businesses would benefit from increased trade from patronage by the additional workforce during the construction period (refer Section 8.6.4).

### 8.6.3 Impacts on tourism

During construction, there is potential for construction noise to impact on the amenity of the hotels in Forest Hill and Gatton, and potential to affect the scenic amenity of town centres including Gatton, Forest Hill and Grandchester.

EIS Chapter 23: Draft Outline Environmental Management Plan summarises the measures to be applied in respect to mitigating impacts on scenic amenity. During construction, measures include:

- Develop a Reinstatement and Rehabilitation Plan as part of the CEMP to minimise disturbance to landscape and visual amenity values
- 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.

The potential for Project infrastructure to reduce tourists' appreciation of views and vistas in the Lockyer Valley is a concern for tourism businesses. Measures to reduce the visual impact of rail infrastructure (EIS Appendix H: Landscape and visual impact assessment technical report) include:

- 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 alignment
- Bridge design which considers appropriate design principles at key viewpoints
- Minimising the extent to which embankments restrict or affect views from nearby residences, to the greatest extent possible
- Minimising the extent of cut batters and undertake sensitive urban design to blend them into their landscape setting.

As noted in Section 7.5.4, when the Project's detailed design is confirmed, ARTC will consult with tourism-related businesses to develop a shared understanding of how the Project may affect businesses, and support the development of a strategy to ensure that generalised impacts on tourism values (such as traffic disruptions on key local tourist routes) are reduced wherever possible. In addition to offering engagement opportunities to all tourism businesses within 5 km of the Project, this will include:

- Engagement with LVRC, and the owners of hotels and businesses in Forest Hill and Gatton to refine mitigation measures (including communication mechanisms, dust controls, noise mitigation measures and traffic management) to reduce impacts on their amenity

- Engagement with the Gatton Show Society as part of detailed design planning for the Spencer Street/Eastern Drive overpass, to confirm peak event times and access requirements, and consider this where possible in the construction methodology to reduce impacts on event patrons
- Engagement with LVRC, ICC and local community groups in potentially impacted communities to:
  - Develop mitigation such as tree screens and noise walls which will reduce visibility to the disturbance footprint
  - Engage with community members in each community to identify works and social programs which will address impacts on rural and historic character and identity
  - Provide financial support for local planning and facility upgrade initiatives which will improve social amenity (e.g. access to and quality of parks and community facilities).

ARTC will also work with the Lockyer Valley Tourism Association and the Ipswich Tourist Operators' Network to support their promotional and marketing campaigns during the construction period and the first two years of operation.

#### **8.6.4 Local supply opportunities**

ARTC is committed to providing full, fair and reasonable opportunities for capable local businesses to compete and participate in the Project's supply chain. ARTC is also committed to ensuring that Indigenous businesses, including those located in the SIA study area, are identified and supported to engage in the Project's supply chain.

#### **Australian Jobs Act requirements**

Inland Rail is subject to the *Australian Jobs Act 2013* 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.

The Project will monitor and report on supplier participation at the following levels:

- Local community: referring to spend within the Ipswich and Lockyer Valley LGAs
- Region: referring to spend with businesses located in LGAs 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.

The Contractor will be required to demonstrate compliance with the Inland Rail AIP Plan and Australian Jobs Act 2013 requirements. Contractors will also be required to prepare and submit to ARTC an AIP Compliance Report every three (3) months in the format prescribed by the AIP Authority.

Inland Rail's AIPP and Sustainable Procurement Strategy will maximise the involvement of businesses with existing capacity, and include a focus on building local businesses' capacity, to increase the number of businesses in the SIA study area that can successfully compete for Project supply opportunities. This will increase employment opportunities for workers and jobseekers in the SIA study area (refer Section 8.6).

ARTC will work with its various service providers, consultants and contractors in their implementation of the AIP Plan. As part of implementing the AIPP, ARTC expects that its contractors and operators will:

- Ensure that commitments made within the Inland Rail AIP Plan 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 criterion and clauses in project procurement processes and contract documents
- Report on local and Indigenous industry participation outcomes.

### **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 Lockyer Valley 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 DSDILGP 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 DSDILGP 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
- 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 LVRC business capability including:

- Providing advance notice of supply opportunities through Chambers of Commerce and to businesses who have registered their interest in Inland Rail through the Inland Rail portal and/or ICN
- Working with supplier advocates to promote supply opportunities and identify capable local suppliers
- Hosting and/ or participating 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
- Cooperation with other major projects under construction in the Project region (e.g. the Remondis Waste to Energy Facility, GWIZ or InterlinkSQ) to facilitate provision of information to businesses about a range of projects and their supply requirements in cooperation with DSDILGP

- 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 SIA study area, are identified and supported to participate in the Project's supply chain.

Opportunities which are being explored with Traditional Owners and other Indigenous and government stakeholders include:

- Information exchange regarding businesses within the Yuggera Ugarapul community and Indigenous business capability in the SIA study area, and the business offerings and skills that contractors require,
- Assisting people within the Yuggera Ugarapul community and other Indigenous people in the SIA study area to identify or develop business capacity building programs which can be supported by ARTC, DSDSATSIP and/or DITRDC prior to Project construction commencing
- In cooperation with DSDSATSIP 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.

### **Sustainable Procurement Policy**

ARTC will implement Inland Rail's 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 (IS) 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.

### **8.6.5 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 GWIZ and/or InterlinkSQ projects in relation to rail dependent industries and/or support industries associated with transport, freight handling, warehousing and logistics.

**8.6.6 Action plan**

Table 8-12 provides the objectives, outcomes, performance management measures, ARTC commitments and management measures to support mitigation of impacts on farms, grazing properties, town centre businesses and tourism businesses, and for ensuring local and Indigenous business participation in the Project.

**Table 8-12 Local business and industry**

Local business and industry measures	
<b>Objective</b>	<ul style="list-style-type: none"> <li>■ Minimise impacts on farming, agribusinesses, tourism businesses and businesses in town centres</li> <li>■ 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</li> <li>■ 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</li> </ul>
<b>Outcomes</b>	<ul style="list-style-type: none"> <li>■ Impacts on businesses including farms and grazing operations are minimised through the implementation of measures outlined in EIS Chapter 23: Draft Outline Environmental Management Plan in cooperation with landowners and business owners</li> <li>■ Businesses in the SIA study area benefit from supply opportunities</li> <li>■ 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</li> <li>■ Impacts on tourism visitation are minimised</li> <li>■ Any cumulative labour draw impacts on local business are identified to enable refinements to recruitment or training strategies</li> </ul>
<b>ARTC Commitments</b>	<ul style="list-style-type: none"> <li>■ Inland Rail’s AIP Plan and Sustainable Procurement Policy will be implemented for the Project</li> </ul>

Local business and industry measures	
	<ul style="list-style-type: none"> <li>■ The Project will support Indigenous businesses to ensure they are prepared for and provided with opportunities to participate</li> <li>■ 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</li> <li>■ The Project will maintain access to services and businesses during construction. Where alternative access arrangements are required, these will be developed in consultation with relevant landowners/occupants</li> <li>■ ARTC will work with key partners to link training and development programs with other projects and local industries to provide the greatest regional benefit</li> <li>■ ARTC will work with DESBT, DITRDC, DSDSATSIP and local and Indigenous businesses to:                         <ul style="list-style-type: none"> <li>– Build businesses’ capacity to participate in the Project’s supply chain through business development, mentoring and pre-qualification projects</li> <li>– Support Indigenous businesses to ensure they are prepared for and provided with opportunities to participate</li> <li>– Provide a clear and efficient process for businesses to seek information about opportunities and register their interest</li> <li>– Work with key partners to link training and development programs with other projects and local industries to provide the greatest regional benefit</li> </ul> </li> </ul>
<b>Measures - detailed design phase</b>	<p><b>Farms and grazing operations</b></p> <ul style="list-style-type: none"> <li>■ Complete property-specific interface agreements and work with directly affected landowners to develop cooperative strategies which will reduce impacts on grazing, cropping businesses or other agribusinesses, which may include, as relevant:                         <ul style="list-style-type: none"> <li>– Property access and communication protocols</li> <li>– Design measures to mitigate impacts on groundwater bores, fences, stock/product movements or water access</li> <li>– Surface and/or groundwater management</li> <li>– Erosion control</li> <li>– Noise and vibration mitigation</li> <li>– Weed and pest management</li> </ul> </li> <li>■ In consultation with landowners adjacent to the disturbance footprint, 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</li> <li>■ Consult with directly affected farm owners and graziers to identify the need for rural adjustment services (e.g. as facilitated by cooperation with the Queensland Rural and Industry Development Authority to be provided to affected landowners)</li> <li>■ Provide community liaison staff with local knowledge to work with landowners who are directly affected by or adjacent to the disturbance footprint to address property-specific impacts and where necessary, referral to services which can assist their adjustment to new circumstances</li> </ul> <p><b>Town centre businesses</b></p> <ul style="list-style-type: none"> <li>■ With the detailed design as a basis, consult with town centre businesses and tourism businesses to develop a shared understanding of how the Project will affect local businesses and agree measures as appropriate which may include:                         <ul style="list-style-type: none"> <li>– Signage to ensure residents and visitors know how to move safely around town whilst construction works are occurring</li> </ul> </li> </ul>



<b>Local business and industry measures</b>	
	<ul style="list-style-type: none"> <li>– The design of pedestrian and cycle access paths</li> <li>– Promotional strategies to offset loss of business trade due to roadworks and/or noise impacts.</li> </ul> <ul style="list-style-type: none"> <li>■ Undertake one-on-one consultation with each business where noise exceedances would be experienced to assist in designing property-specific noise mitigation measures.</li> <li>■ Consult with each business that is adjacent to the footprint to take account of their specific needs for access and operation, including consideration of the needs of transport-related operations, agricultural operations and town-based businesses</li> <li>■ Consult with the Project’s CRG, local Chambers of Commerce, tourism associations and tourism service providers in the Ipswich and Lockyer Valley LGAs to:                         <ul style="list-style-type: none"> <li>– Explain draft Outline EMP and CEMP provisions and accept feedback on measures of relevance to tourism, farming and other businesses</li> <li>– Identify any additional, feasible strategies which would reduce or offset impacts on connectivity or businesses’ amenity during construction and/or operation</li> <li>– Continue to consult with businesses subject to potential land acquisition processes and work with business operators to reduce the potential for impacts on their amenity and access</li> </ul> </li> </ul> <p><b>Tourism</b></p> <ul style="list-style-type: none"> <li>■ When the Project’s detailed design is confirmed, consult with ICC, LVRC and tourism-related businesses (including accommodation facilities, farms, restaurants, cafes and specialty shops) located within 5 km of the Project to facilitate a shared understanding of how impacts resulting from road works, changes to the road network or noise may affect businesses</li> <li>■ Engage with the owners of hotels in Forest Hill and Gatton, to identify and implement mitigation (including communication mechanisms, dust controls and noise mitigation measures) to reduce impacts on the hotels’ amenity during construction</li> <li>■ Consult with the Gatton Show Society as part of detailed design planning for the Spencer Street/Eastern Drive overpass, to confirm peak event times and access requirements, and consider this where possible in the construction methodology to reduce impacts on event patrons.</li> <li>■ Develop measures, working with tourism associations and the ICC and LVRC, to ensure that the impacts on the amenity of businesses and traffic disruptions on key local tourist routes are reduced wherever possible, for incorporation in the CEMP</li> </ul> <p><b>Local supply opportunities</b></p> <ul style="list-style-type: none"> <li>■ Liaise with the following stakeholders to locate specific business capacities of relevance to the Project’s supply chain:                         <ul style="list-style-type: none"> <li>– DITRDC</li> <li>– RDA</li> <li>– Chambers of Commerce/Industry in the Ipswich and Lockyer Valley LGAs</li> </ul> </li> <li>■ Work with DSDILGP/DRDMW to deliver ‘Working with Major Projects’ (or similar) workshops across the Project region</li> <li>■ Deliver supplier briefings as part of the tendering process</li> <li>■ Conduct supplier ‘Meet and Greet’ sessions with short listed companies to enable them to meet with potential contractors and exchange information</li> <li>■ Complete a scan of Indigenous businesses in SEQ which could service the Project and develop an Indigenous business register which can be used by Contractors and Project operators</li> </ul>

Local business and industry measures	
	<ul style="list-style-type: none"> <li>■ Communicate pre-qualification requirements to businesses in the Ipswich and Lockyer Valley LGAs to allow local and regional businesses to achieve the relevant requirements</li> <li>■ 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</li> </ul>
<b>Measures - pre-construction phase</b>	<p><b>Farms and grazing operations</b></p> <ul style="list-style-type: none"> <li>■ Maintain regular engagement with landowners and other business owners adjacent to the temporary construction disturbance footprint (at least quarterly during the first year of construction or as agreed with landowners) to monitor the effectiveness of environmental and social impact mitigation measures</li> <li>■ Provide regular Project updates which forecast road works, road realignments and closures, and explain alternative routes</li> <li>■ Continue engagement with property owners regarding management of direct impacts on properties and mitigation of potential impacts</li> </ul> <p><b>Town centre businesses</b></p> <ul style="list-style-type: none"> <li>■ Implement measures identified in consultation with businesses near the disturbance footprint to reduce impacts on their amenity or road access, as relevant to the pre-construction period</li> <li>■ Maintain regular engagement with town centre businesses and the Lockyer Valley Chamber of Commerce and Industry to evaluate the effectiveness of mitigation measures and initiate any corrective actions that are indicated</li> </ul> <p><b>Tourism</b></p> <ul style="list-style-type: none"> <li>■ Work with Councils, Chambers of Commerce, tourism associations and tourism service providers in potentially impacted communities to implement the initiatives identified in the detailed design phase</li> <li>■ Work with the Lockyer Valley Tourism Association, the Lockyer Valley Chamber of Commerce and interested businesses to support their monitoring of visitation levels and develop and fund marketing or business capacity development strategies during the construction period and the first two years of operation</li> </ul> <p><b>Local supply opportunities</b></p> <ul style="list-style-type: none"> <li>■ Implement the AIP Plan as relevant to the pre-construction phase</li> <li>■ Work with Traditional Owner groups to identify existing business capacity within the Yuggera Ugarapul communities, and help them to identify business capacity building programs to be supported by ARTC, DSDSATSIP and/or DITRDC</li> <li>■ Deliver capacity building programs including:                         <ul style="list-style-type: none"> <li>– Working with supplier advocates to promote supply opportunities and identify capable local suppliers</li> <li>– Hosting and/or participating in supplier briefing and networking events</li> <li>– Training and mentoring support that builds business capability</li> <li>– Support to enable businesses to understand the requirements of supplying to Inland Rail</li> <li>– Providing formal feedback to unsuccessful suppliers</li> </ul> </li> <li>■ Work with the Ipswich and Lockyer Valley Chambers of Commerce, to encourage relevant supply chain development for local and Indigenous businesses</li> <li>■ Provide updates to local and regional businesses to ensure they have access to current information about the Project</li> </ul>

Local business and industry measures	
	<ul style="list-style-type: none"> <li>■ Communicate pre-qualification requirements to businesses in the Project region to allow local and regional businesses to achieve the relevant requirements</li> <li>■ Facilitate the delivery of workshops with businesses aimed at building their capacity for involvement in major project construction and associated services</li> <li>■ Encourage tenderers for construction contracts to set appropriate targets and/or incentives to utilise local and Indigenous businesses</li> <li>■ Consult with DESBT, DSDSATSIP, ICC, LVRC and Chambers of Commerce, to encourage relevant supply chain development, especially for Indigenous businesses</li> <li>■ Provide local business briefings to promote supply opportunities ahead of the construction phase</li> <li>■ Encourage tenderers for construction contracts to set appropriate targets and/or incentives to utilise local and Indigenous businesses</li> </ul>
<b>Measures – construction phase</b>	<p><b>Impacts on farms</b></p> <ul style="list-style-type: none"> <li>■ Maintain regular engagement with landowners and other business owners adjacent to the temporary construction disturbance footprint (at least quarterly during the first year of construction or as agreed with landowners) to monitor the effectiveness of environmental and social impact mitigation measures</li> <li>■ Provide regular Project updates which forecast road works, road realignments and closures, and explain alternative routes</li> </ul> <p><b>Town centre and tourism businesses</b></p> <ul style="list-style-type: none"> <li>■ Provide support for local marketing and/or business development initiatives</li> <li>■ Engage with businesses affected by Project construction works on a regular basis (e.g. quarterly) to monitor the effectiveness of environmental management measures and institute corrective actions (e.g. modification of environmental or traffic management measures) if required</li> <li>■ Work with the Lockyer Valley Tourism Association and the Ipswich Tourist Association to support their monitoring of visitation levels and promotional and marketing campaigns during the construction period and the first two years of operation</li> </ul> <p><b>Local supply opportunities</b></p> <ul style="list-style-type: none"> <li>■ Implement the AIP Plan and report on compliance with the AIP Plan, including participation of businesses from the SIA study area in the Project’s supply chain</li> <li>■ Implement the Project’s Sustainable Procurement Policy to maximise local industry opportunities during the construction phase</li> <li>■ Implement capacity building strategies identified in cooperation with stakeholders during the detailed design and pre-construction stages</li> <li>■ Promote Government services and programs which are available to businesses considering investment in projects related to Inland Rail</li> <li>■ Ensure information about Project supply opportunities during the Project’s operation are provided on the Inland Rail portal</li> </ul>

## 8.7 Monitoring, reporting and review

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
- 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 indicators
- 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.

ARTC is committed to publicly reporting social performance outcomes and will release quarterly snapshot reports outlining employment and business participation achieved by the Project. Monitoring updates on delivery of the SIMP will be reported at each CRG meeting (as available) and will be considered in the annual reviews of the SIMP.

The SIMP will be reviewed annually during construction, 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 will be included in ongoing mitigation and/or monitoring. A report on the annual SIMP review will be provided to the Office of the Coordinator-General and to the Project's CRG.

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, and will include consultation with Councils, landowners, community members and Queensland Government agencies. The independent SIMP reviews will identify the SIMP's effectiveness, and any changes which need to be made 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 Office of the Coordinator-General regarding any future need for the SIMP.

The monitoring program will be reviewed prior to operations, and then implemented for operations, and revised if necessary, in Year 3 of operations.

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**

Impact areas	Outcomes	Performance indicators	Mechanisms	Monitoring Frequency
<b>Workforce management</b>				
<ul style="list-style-type: none"> <li>■ Local and Indigenous employment</li> <li>■ Training and development opportunities</li> <li>■ Workforce behaviour /community safety</li> <li>■ Skills shortages</li> </ul>	<ul style="list-style-type: none"> <li>■ Workers within 125 km of the Project including job seekers living in the SIA study area are involved in the construction workforce, with a particular focus on providing opportunities for residents in potentially impacted communities</li> </ul>	<ul style="list-style-type: none"> <li>■ Number of people from the Project region that are employed in Project construction, in line with outcomes agreed between ARTC and the construction contractor</li> </ul>	<ul style="list-style-type: none"> <li>■ Construction contractor employment register identifying personnel's postcodes</li> <li>■ Quarterly public snapshot report providing information on employment and business participation from the Ipswich and Lockyer Valley LGAs</li> </ul>	<ul style="list-style-type: none"> <li>■ Six-monthly during construction</li> </ul>
	<ul style="list-style-type: none"> <li>■ ARTC and construction contractor partnerships contribute to increased training and development opportunities in the Project region, reducing labour draw from local businesses</li> </ul>	<ul style="list-style-type: none"> <li>■ Number of trainees and apprentices involved in construction work</li> <li>■ Number of people from the Project region involved in training opportunities facilitated by the Project</li> <li>■ Traineeship completion/retention rate</li> </ul>	<ul style="list-style-type: none"> <li>■ ARTC's Inland Rail Skills Academy monitoring process in cooperation with training partners</li> <li>■ Construction contractor's trainee and apprenticeship register</li> </ul>	<ul style="list-style-type: none"> <li>■ Six-monthly during construction</li> </ul>
	<ul style="list-style-type: none"> <li>■ Construction employment opportunities are available to Traditional Owners and local Indigenous people</li> </ul>	<ul style="list-style-type: none"> <li>■ Number of Indigenous people involved in construction employment, in line with outcomes agreed between ARTC and the construction contractor</li> </ul>	<ul style="list-style-type: none"> <li>■ Construction contractor's construction employment register, identifying personnel's Indigenous identification, by agreement with personnel</li> <li>■ ARTC monitoring of workforce management plan implementation</li> </ul>	<ul style="list-style-type: none"> <li>■ Quarterly during construction</li> </ul>
	<ul style="list-style-type: none"> <li>■ All Project personnel behave with respect and courtesy towards residents, landowners and motorists</li> </ul>	<ul style="list-style-type: none"> <li>■ Number of substantiated complaints regarding workforce behaviour</li> </ul>	<ul style="list-style-type: none"> <li>■ Construction contractor monitoring of Code of Conduct implementation and compliance</li> <li>■ Complaints register</li> <li>■ CRG feedback</li> </ul>	<ul style="list-style-type: none"> <li>■ Monthly during construction – complaints register</li> </ul>



Impact areas	Outcomes	Performance indicators	Mechanisms	Monitoring Frequency
				<ul style="list-style-type: none"> <li>Quarterly during construction - CRG</li> </ul>
	<ul style="list-style-type: none"> <li>Workplace health and safety are supported through a strong safety culture</li> </ul>	<ul style="list-style-type: none"> <li>Implementation of construction contractor’s Work Health and Safety Plan</li> <li>Lost Time Incident rate in comparison to relevant national standard</li> </ul>	<ul style="list-style-type: none"> <li>Workplace Health and Safety records</li> </ul>	<ul style="list-style-type: none"> <li>Monthly during construction</li> </ul>
	<ul style="list-style-type: none"> <li>Impacts on agricultural and tourism employment opportunities are minimised</li> </ul>	<ul style="list-style-type: none"> <li>Management measures for agricultural properties are implemented in accordance with agreements with landowners</li> <li>Job vacancies data do not show any upward trend in tourism occupation vacancies or downward trend in agricultural industry vacancies attributable to the Project</li> </ul>	<ul style="list-style-type: none"> <li>Construction contractor engagement with landowners to monitor the effectiveness of management measures</li> <li>Construction contractor engagement with Lockyer Valley Tourism Association and Ipswich Tourist Operators’ Network to monitor tourism visitation</li> <li>Regional Australia Institute Regional Jobs vacancies annual data report</li> </ul>	<ul style="list-style-type: none"> <li>Six-monthly during construction – landowner engagement</li> <li>Annually during construction – Regional Jobs vacancies and liaison with Tourism associations</li> </ul>
<b>Housing and accommodation</b>				
<ul style="list-style-type: none"> <li>Potential for cumulative demands to impact on housing access and affordability</li> <li>Potential to displace tourists or community event visitors from tourist accommodation</li> </ul>	<ul style="list-style-type: none"> <li>Rental housing vacancy rates are not affected by Project demands</li> </ul>	<ul style="list-style-type: none"> <li>No displacement of local residents from housing due to Project-related increases in housing demand</li> </ul>	<ul style="list-style-type: none"> <li>Consultation with real estate agents in potentially impacted communities</li> <li>Consultation with Laidley Crisis Care and Accommodation</li> <li>Pricefinder/SQMResearch data on rental vacancy rates and rental price trends</li> <li>ARTC will monitor the effectiveness of the AMP, in consultation with DCHDE, ICC and SRRC, including requests for provision of Councils’</li> </ul>	<ul style="list-style-type: none"> <li>Quarterly during construction</li> </ul>

Impact areas	Outcomes	Performance indicators	Mechanisms	Monitoring Frequency
			feedback regarding any housing/accommodation use	
	<ul style="list-style-type: none"> <li>DTMR tenants who would relocate are supported to find suitable housing</li> </ul>	<ul style="list-style-type: none"> <li>All DTMR tenants within the disturbance footprint have access to support to relocate and re-establish social networks</li> </ul>	<ul style="list-style-type: none"> <li>Joint work package with DTMR/DCHDE, potentially involving Laidley Crisis Care and Accommodation and/or Lifeline</li> </ul>	<ul style="list-style-type: none"> <li>Monthly during detailed design/pre-construction phase, or until all tenants are re-settled</li> </ul>
	<ul style="list-style-type: none"> <li>Access to seasonal workers' accommodation is maintained</li> </ul>	<ul style="list-style-type: none"> <li>The current level of availability of seasonal workers' accommodation in the Lockyer Valley LGA is maintained</li> <li>The Project implements mitigation measures to address any loss of seasonal workers' accommodation as per Table 8-10</li> </ul>	<ul style="list-style-type: none"> <li>Consultation with LVRC and Lockyer Valley Growers to monitor availability of seasonal workers' accommodation</li> <li>Monitor the number of accommodation units available to seasonal workers in Gatton Caravan Park, Homestyle Lodge (Laidley) and Grantham Farmworkers Lodge</li> </ul>	<ul style="list-style-type: none"> <li>Quarterly during pre-construction and the first two years of construction</li> </ul>
	<ul style="list-style-type: none"> <li>Tourists and event visitors are not displaced from tourism accommodation due to Project demands</li> </ul>	<ul style="list-style-type: none"> <li>Hotel/motel operators report adequate capacity for tourist trade in the Project region</li> </ul>	<ul style="list-style-type: none"> <li>Consultation with tourism accommodation providers to identify occupancy baseline at commencement of construction, and to monitor and enable management of any potential to displace tourists</li> </ul>	<ul style="list-style-type: none"> <li>Six-monthly during construction</li> </ul>
	<ul style="list-style-type: none"> <li>Accommodation providers in the Project region benefit from any Project requirements for workforce accommodation</li> </ul>	<ul style="list-style-type: none"> <li>Workforce accommodation solutions include accommodation providers in the Project region</li> </ul>	<ul style="list-style-type: none"> <li>Accommodation register</li> <li>Consultation with providers of accommodation used by Project personnel to identify effects on occupancy rates</li> </ul>	<ul style="list-style-type: none"> <li>Quarterly during first two years of construction (during which workforce numbers will peak)</li> </ul>
	<ul style="list-style-type: none"> <li>Inland Rail projects' cumulative demands for housing in the Project region are monitored, and strategies</li> </ul>	<ul style="list-style-type: none"> <li>The construction contractor has a coordinated approach to monitoring and mitigating the demands of Inland Rail projects on housing and accommodation and will</li> </ul>	<ul style="list-style-type: none"> <li>Consultation with DCHDE, LVRC and ICC to seek input to evaluation of cumulative impacts</li> </ul>	<ul style="list-style-type: none"> <li>Quarterly during construction</li> </ul>

Impact areas	Outcomes	Performance indicators	Mechanisms	Monitoring Frequency
	put in place if cumulative impacts appear likely	enable corrective action if strains on housing or accommodation are identified	<ul style="list-style-type: none"> <li>Pricefinder/SQMResearch data on rental vacancy rates and rental price trends</li> </ul>	
<b>Health and community wellbeing</b>				
<ul style="list-style-type: none"> <li>Impacts of noise on lifestyles/sleep</li> <li>Increased demands for health, community support and/or emergency services</li> <li>Impacts on mental health through stress and anxiety related to the Project</li> <li>Impacts on community/traffic safety, or emergency vehicle responses</li> <li>Community benefits for participation in Project employment, supply chain or community initiatives supported by the Project</li> </ul>	<ul style="list-style-type: none"> <li>Changes in the amenity of residential properties and community facilities and the potential for noise to result in disturbance and/or intrusion in accordance with the Project's approval conditions and where relevant, agreements with affected property owners</li> </ul>	<ul style="list-style-type: none"> <li>Number of complaints about noise and dust issues</li> </ul>	<ul style="list-style-type: none"> <li>CRG feedback</li> <li>Complaints register</li> </ul>	<ul style="list-style-type: none"> <li>Quarterly during construction</li> </ul>
	<ul style="list-style-type: none"> <li>Vulnerable residents who could be affected by relocation, construction noise or dust are supported to adapt to changes</li> </ul>	<ul style="list-style-type: none"> <li>Landowners and tenants in and adjacent to the disturbance footprint agree they have access to timely Project information and an established Project contact</li> <li>All residents who would need to relocate from the disturbance footprint have access to support if required</li> </ul>	<ul style="list-style-type: none"> <li>Community Relations Monitor</li> <li>CRG feedback</li> <li>ARTC/PHN records of support services provided to relocating residents</li> <li>Results of cooperative monitoring of service demands with DCHDE</li> </ul>	<ul style="list-style-type: none"> <li>Six-monthly during construction</li> </ul>
	<ul style="list-style-type: none"> <li>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</li> </ul>	<ul style="list-style-type: none"> <li>Number of people from potentially impacted communities accessing mental health service provided by ARTC-PHN partnership</li> <li>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</li> </ul>	<ul style="list-style-type: none"> <li>With the PHNs, ARTC will monitor mental health service uptake in potentially impacted communities</li> <li>ARTC or the construction contractor will consult with DCHDE 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</li> </ul>	<ul style="list-style-type: none"> <li>Quarterly during construction – with PHNs</li> <li>Annually during construction – with DCHDE and CRG</li> </ul>

Impact areas	Outcomes	Performance indicators	Mechanisms	Monitoring Frequency
	<ul style="list-style-type: none"> <li>Impacts on the amenity of community facilities are minimised</li> </ul>	<ul style="list-style-type: none"> <li>Community facilities and parks affected by land acquisition, noise exceedances or changes to connectivity (such as path networks) maintain their availability of community activities, events and networks and are supported to enhance their amenity and/or functionality</li> </ul>	<ul style="list-style-type: none"> <li>CRG, ICC and LVRC feedback on the benefits of community projects funded</li> <li>CRG feedback</li> <li>Department of Education feedback on school amenity</li> <li>Agreements with community facilities e.g. interface agreements where required</li> <li>Community Donations and Sponsorship records</li> </ul>	<ul style="list-style-type: none"> <li>Six-monthly during construction</li> </ul>
	<ul style="list-style-type: none"> <li>Provision of information on workforce ramp-up and the construction program enables Government agencies to plan for increased demands for health, police and emergency services</li> </ul>	<ul style="list-style-type: none"> <li>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</li> </ul>	<ul style="list-style-type: none"> <li>ARTC or construction contractor will consult regularly, to a schedule agreed with Queensland Health, QPS, QAS and QFES</li> <li>Requests for provision of Councils' feedback regarding community needs six monthly during construction</li> </ul>	<ul style="list-style-type: none"> <li>Quarterly during the first two years of construction</li> </ul>
	<ul style="list-style-type: none"> <li>The wellbeing of residents in the Project region is supported by access to community programs and events which enable community participation</li> </ul>	<ul style="list-style-type: none"> <li>Number, financial value and outcome measures for community partnerships and programs in potentially impacted communities</li> <li>Community Donations and Sponsorship-funded projects provide demonstrated benefits for local community members</li> </ul>	<ul style="list-style-type: none"> <li>Monitoring of delivery and effectiveness of Community Wellbeing Plan</li> <li>Records of ARTC and Contractor partnerships with community and government organisations</li> <li>Record of ARTC sponsorships and donations</li> <li>Funded organisations' reports on outcomes of projects funded by the Project</li> </ul>	<ul style="list-style-type: none"> <li>Six-monthly during construction</li> </ul>

Impact areas	Outcomes	Performance indicators	Mechanisms	Monitoring Frequency
			<ul style="list-style-type: none"> <li>Requests for provision of Council feedback six monthly during construction on the results of initiatives to offset impacts on amenity, character and cohesion</li> </ul>	
<b>Local business and industry</b>				
<ul style="list-style-type: none"> <li>Impacts on agricultural operations</li> <li>Potential deterrence of tourists</li> <li>Local and Indigenous business opportunities</li> <li>Draw of labour from local businesses</li> </ul>	<ul style="list-style-type: none"> <li>Impacts on businesses including farms and grazing operations are minimised through the implementation of measures outlined in the draft Outline EMP in cooperation with landowners and business owners</li> </ul>	<ul style="list-style-type: none"> <li>Ongoing engagement with directly affected landowners and business owners supports effective mitigation and where necessary adaptive management of impacts on farms, businesses and grazing operations</li> </ul>	<ul style="list-style-type: none"> <li>Construction contractor will engage with landowners (to schedules agreed with landowners) to monitor the effectiveness of management measures relevant to on-property or road access impacts</li> </ul>	<ul style="list-style-type: none"> <li>Annually during construction</li> </ul>
	<ul style="list-style-type: none"> <li>Businesses in the Project region benefit from supply opportunities</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrated alignment of major contracts and contractors to the AIP Plan goals and ARTC’s Sustainable Procurement Policy</li> <li>Number and value of contracts with businesses located in the Ipswich and Lockyer Valley LGAs as a percentage of all supply contracts for the Project</li> <li>Percentage of expenditure in the Project region compared to overall annual Project expenditure for construction</li> </ul>	<ul style="list-style-type: none"> <li>Project’s Local Regional and Indigenous Supplier register</li> <li>AIP Plan reports</li> <li>Requests for provision of Council feedback on local procurement outcomes</li> </ul>	<ul style="list-style-type: none"> <li>Annually during construction</li> </ul>
	<ul style="list-style-type: none"> <li>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</li> </ul>	<ul style="list-style-type: none"> <li>Number and value of contracts with Indigenous businesses in the Ipswich and Lockyer Valley LGAs, as a percentage of all supply contracts for the Project</li> </ul>	<ul style="list-style-type: none"> <li>Construction contractor’s supplier register, and procurement records will identify involvement of Indigenous businesses to enable reporting</li> </ul>	<ul style="list-style-type: none"> <li>Quarterly during construction</li> </ul>

Impact areas	Outcomes	Performance indicators	Mechanisms	Monitoring Frequency
	<ul style="list-style-type: none"> <li>■ Impacts on tourism visitation are minimised</li> </ul>	<ul style="list-style-type: none"> <li>■ Project impacts e.g. roadworks or changes to scenic character are mitigated in accordance with the draft Outline EMP</li> </ul>	<ul style="list-style-type: none"> <li>■ Establish baseline information on tourism visitation (Ipswich LGA and Lockyer Valley LGA)</li> <li>■ Contractor engagement with Lockyer Valley Tourism Association and Ipswich Chamber of Commerce to monitor any decreases in visitation established as attributable to the Project, to enable corrective actions</li> </ul>	<ul style="list-style-type: none"> <li>■ Annually during construction</li> </ul>
	<ul style="list-style-type: none"> <li>■ Any cumulative labour draw impacts on local business are identified to enable refinements to recruitment or training strategies</li> </ul>	<ul style="list-style-type: none"> <li>■ 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</li> </ul>	<ul style="list-style-type: none"> <li>■ The Project will consult with LVRC, ICC, 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</li> </ul>	<ul style="list-style-type: none"> <li>■ Six-monthly during construction</li> </ul>



## 9 Impact assessment

This section summarises the significance of social impacts and benefits for local communities and stakeholders and 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 significance of social impacts and 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 risk assessment ratings, which consider the likelihood and consequence of impacts and benefits and the resulting significance of social impacts.

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 on potential social impacts and benefits, and the results of environmental, land use, visual, traffic and cultural heritage impact assessments undertaken as part of the Project’s EIS.

‘Consequence’, as defined in Table 9-2, has been qualitatively 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 stakeholders’ specific vulnerabilities and resilience to impacts
- The severity of potential impacts on stakeholders and social conditions, and the magnitude of potential benefits, considering the number of people that could benefit and the potential to address inequities such as high unemployment amongst local and Indigenous people.

**Table 9-1 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
<b>Significance of Social Impact Ratings</b>							
	Low		Medium		High		Extreme
	Project benefits and opportunities						

Source: NSW DP&E 2017

**Table 9-2 Consequence criteria**

Rating	Impact (-)	Benefit (+)
<b>Minimal</b>	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.
<b>Minor</b>	Short-term (1-3 years) recoverable changes to social characteristics and values of the community or stakeholders, or the communities/stakeholders has substantial capacity to adapt and cope with change.	Short-term opportunities emanating from the Project.
<b>Moderate</b>	Medium-term (4-10 years) recoverable changes to social characteristics and values of the of the community or stakeholders, or the communities/stakeholders has some capacity to adapt and cope with change.	Medium-term opportunities emanating from the Project.
<b>Major</b>	Long-term (more than 10 years) recoverable changes to social characteristics and values of the of the community or stakeholders, or the communities/stakeholders has limited capacity to adapt and cope with change.	Long-term opportunities emanating from the Project.
<b>Catastrophic</b>	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 DSDMIP (QLD.) Social impact assessment guideline July 2013.

Table 9-3 summarises:

- Potential social impacts and benefits as a result of the Project, including stakeholders that are potentially affected
- A preliminary evaluation of the significance of potential social impacts and benefits, after considering ARTC’s existing commitments
- Project-specific management measures
- An evaluation of residual significance, after Project-specific measures are applied.

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.

The adequacy of management measures is inferred by the difference between the pre- and post-mitigation significance ratings, i.e. the expected change in the likelihood that the impact or benefit will occur, negative consequences will be reduced, or the magnitude of benefits will be enhanced.

Symbols used include:

- +ve, denoting positive impact
- -ve, denoting negative impact.

Project phases are shown as:

- Construction (C), which includes pre-construction, and represents a period of four to five years
- Operation (O), which represents the Project’s design life of 100 years
- C&O, denoting impacts which commence in construction and continue for the Project’s life.

Preliminary (prelim) risk refers to the assessed level of significance to stakeholders and communities prior to application of mitigation strategies. and residual risk refers to the assessed levels of significance following mitigation.

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.

**Table 9-3 Social impacts and benefits**

Impact area	Impact description	Phase	Nature	Stakeholders affected	Prelim. risk	Project-specific strategies	Residual risk
<b>Communities and stakeholders</b>							
Indigenous values	Native Title rights may exist and be affected on seven land parcels identified as Reserve or State land.  Where the Project is outside the West Moreton System rail corridor, it may affect cultural landscapes and Indigenous people’s feelings of connection to the landscape.	C&O	-ve	Yuggera Ugarapul People	B4	<ul style="list-style-type: none"> <li>Consultative processes associated with the extinguishment of Native Title</li> <li>CHMP addressing impacts on cultural heritage values</li> <li>Cultural awareness program developed with Yuggera Ugarapul people for delivery to Project personnel</li> </ul>	B3
Land acquisition and use of DTMR properties	Full acquisition of freehold properties equivalent to an estimated 19 households is required, and the tenants of seven properties owned by DTM ) would need to relocate., for a total estimated 26 households that would need to relocate from within the disturbance footprint. This would result in stress and anxiety for affected residents, and disruption of their lifestyles and social networks. Partial acquisition of private properties will also be required which may result in property severance, including impacts on agricultural land (refer Business and Industry).	C	- ve	Directly affected landowners and tenants	A3	<ul style="list-style-type: none"> <li>Compensation in accordance with AL Act</li> <li>Property-specific agreements which address impacts on properties’ use and amenity</li> <li>Funding for mental health and community support services which support local residents</li> <li>Joint working arrangements to support DTMR tenants</li> </ul>	A2

Inland Rail Helidon to Calvert EIS – Appendix Q: Social Impact Assessment technical report

Impact area	Impact description	Phase	Nature	Stakeholders affected	Prelim. risk	Project-specific strategies	Residual risk
Construction noise	<p>Assessment of construction noise impacts indicates that there is potential for noise to exceed Project criteria for a large number of receptors e.g. up to 1,496 receptors that could be affected by earthworks, whilst the activity is occurring nearby. This would impact on the amenity of dwellings in the EIS investigation corridor. There is potential for effects on quality of life as a result, including decreased enjoyment of outdoor activities.</p> <p>Whilst noise impacts from track construction would be transitory as works move along the corridor, construction noise and traffic noise related to bridge construction sites and laydown areas could affect the amenity of nearby properties for extended periods.</p> <p>Ground-borne noise is possible within approximately 50 m of the Project but is likely to be masked by airborne noise.</p>	C	- ve	Nearby landowners, residents, businesses and community facilities	A4	<ul style="list-style-type: none"> <li>Mitigation measures provided in draft Outline EMP – Noise and vibration, air quality, traffic management</li> <li>Residents within 2 km of the disturbance footprint and other relevant stakeholders will be provided with sufficient information to enable them to understand the likely nature, extent and duration of noise and vibration impacts</li> <li>Consultation with landowners adjacent to rail corridor, bridge construction sites and laydown areas to identify particular sensitivities (such as trauma relating to flooding events) and potential mitigation for consideration in CEMP</li> <li>Ongoing engagement with residents affected by construction noise to enable adaptive management</li> <li>Complaints process</li> </ul>	A3
Blasting	Blasting would be required in five locations. Any noise or vibration resulting from blasting would be short-term but may cause concern to residents.	C	- ve	Nearby residents	B3	<ul style="list-style-type: none"> <li>Management measures outlined in draft Outline EMP, including establishing a blasting timetable through consultation with surrounding sensitive receptors</li> </ul>	B2

Inland Rail Helidon to Calvert EIS – Appendix Q: Social Impact Assessment technical report

Impact area	Impact description	Phase	Nature	Stakeholders affected	Prelim. risk	Project-specific strategies	Residual risk
Tunnel construction – noise and vibration	<p>Tunnelling under homes would result in vibration. If vibration is perceptible to residents, it is likely to result in a minor short-term nuisance.</p> <p>Ground-borne noise due to tunnelling using a roadheader has been predicted to exceed the ground-borne 'Dwellings – Standard hours' noise criteria for 29 sensitive receptors and could exceed the 'Dwellings – Non-standard hours' criteria for 39 sensitive receptors, whilst tunnelling is occurring near sensitive receptors. This may also result in a minor short-term nuisance.</p>	C	- ve	Nearby residents and those above the tunnelling area	B2	<ul style="list-style-type: none"> <li>Management measures provided in draft Outline EMP are expected to minimise the potential for vibration and ground-borne noise to cause annoyance to nearby residents, and to avoid damage to structures.</li> </ul>	B1
Operational noise	<p>Assessment of the Project's potential noise impacts during operation indicates that noise levels will trigger a review of feasible and practicable noise mitigation measures at approximately 285 sensitive receptors at Project opening (2026) and an additional 30 sensitive receptors at 2040.</p> <p>Noise exceedances are likely due to operation affecting the amenity of homes and community facilities. Noise may be experienced by nearby residents as intrusive, regardless of regulatory compliance.</p>	O	- ve	Adjacent landowners, business owners and tenants	A3	<ul style="list-style-type: none"> <li>Mitigation measures provided in draft Outline EMP - Noise and vibration</li> <li>Property-specific mitigation where triggered by noise exceedances</li> <li>Appendix P: Operational railway noise and vibration technical report notes that further analysis of design and engineering factors to determine the location, extent and height of the concept noise barriers will be required</li> <li>Complaints process</li> </ul>	A2



Inland Rail Helidon to Calvert EIS – Appendix Q: Social Impact Assessment technical report

Impact area	Impact description	Phase	Nature	Stakeholders affected	Prelim. risk	Project-specific strategies	Residual risk
Dust	Clearing, earthworks, traffic on unsealed roads and construction activities could result in dust nuisance for nearby properties.	C	- ve	Adjacent landowners, business owners and tenants	B3	<ul style="list-style-type: none"> <li>Mitigation measures provided in draft Outline EMP – Air quality</li> <li>Complaints process</li> </ul>	B2
	Air quality assessment (EIS Appendix K: Air quality technical report) indicates that the Project's operation poses a low risk of air quality impacts after recommended mitigation are implemented.	O	- ve	Residents living near rail corridor, including the Little Liverpool tunnel	C3	<ul style="list-style-type: none"> <li>Mitigation measures provided in draft Outline EMP – Air quality</li> <li>Requirement for mitigation to transport wagons</li> <li>Community information about air quality assessment results</li> <li>Complaints process</li> </ul>	C2
Town centre amenity	The amenity of Gatton, Forest Hill and Grandchester will be impacted by construction works and laydown areas, which will introduce noise, traffic disruption, dust and changes to local character. Impacts on connectivity to Helidon, Laidley and Calvert may also occur during the construction of rail crossings.	C	- ve	Residents and businesses in Gatton, Forest Hill, Grandchester, Helidon, Laidley and Calvert, LVRC and ICC	A4	<ul style="list-style-type: none"> <li>Detailed strategies outlined in draft Outline EMP - Noise and vibration, traffic management and visual amenity</li> <li>Support for community initiatives to build resilience and community participation in potentially impacted communities</li> <li>Partnerships with LVRC and ICC, and with local communities, to mitigate amenity and connectivity impacts</li> <li>Complaints process</li> </ul>	A3
	During operations, the Project would result in an increase in the number and size of trains, increasing the frequency of rail noise in town centres, and interrupting north-south movements across town in Gatton, Forest Hill and Grandchester.	O	- ve	Residents, businesses, customers and visitors	A3	<ul style="list-style-type: none"> <li>Partnership with LVRC and local communities to mitigate amenity and connectivity impacts</li> <li>Local area planning partnerships, as agreed, with LVRC and ICC</li> <li>Complaints process</li> </ul>	A2

Inland Rail Helidon to Calvert EIS – Appendix Q: Social Impact Assessment technical report

Impact area	Impact description	Phase	Nature	Stakeholders affected	Prelim. risk	Project-specific strategies	Residual risk
	Combined impacts of rail construction on amenity of surrounding rural landowners and the towns of Calvert and Helidon respectively if works coincide	C	- ve	Calvert and Helidon residents	C3	<ul style="list-style-type: none"> <li>Project communication strategies will address any potential for coincidence of works that could have cumulative impacts</li> </ul>	C2
Rural residential amenity	Noise from construction activities may affect the amenity of rural residential dwellings in Helidon, Helidon Spa, Laidley North, Plainlands and Calvert whilst construction works are near homes.	C	- ve	Residents in rural residential areas in Helidon's north and east, Helidon Spa, Placid Hills, Laidley North and Calvert	B3	<ul style="list-style-type: none"> <li>Consult with adjacent landowners to identify particular sensitivities and potential mitigation for consideration in CEMP, including noise mitigation where triggered</li> <li>Mitigation measures provided draft Outline EMP - Noise and vibration</li> <li>Complaints process</li> </ul>	B2
	Rail noise and changes to views from homes may detract from the enjoyment of rural residential dwellings near the Project.	O	- ve	Residents as above	A4	<ul style="list-style-type: none"> <li>Mitigation measures provided in draft Outline EMP - Noise and vibration</li> <li>Consult with landowners regarding potential mitigation which could reduce impacts on visual amenity</li> <li>Complaints process</li> </ul>	A3
Local character /sense of place	Construction works and sites will detract from the quiet rural character of towns and rural areas, resulting in community sadness about the changes, though temporary. Impacts on cultural heritage places would be minimal, but the removal of houses and farm buildings from within the disturbance footprint may be experienced as a loss of local character.	C	- ve	Residents, landowners and visitors	B3	<ul style="list-style-type: none"> <li>Engage with LVRC, ICC and local community groups in all potentially impacted communities to identify works and social programs which will address impacts on rural character and identity</li> <li>Provide financial support for local planning and facility upgrade initiatives which will improve social amenity (e.g. access to and quality of parks and community facilities)</li> </ul>	B2

Inland Rail Helidon to Calvert EIS – Appendix Q: Social Impact Assessment technical report

Impact area	Impact description	Phase	Nature	Stakeholders affected	Prelim. risk	Project-specific strategies	Residual risk
	Construction works including the laydown area would affect the character and connectivity of Grandchester whilst works are occurring there, potentially affecting sense of place and tourism visitation.	C	- ve	Grandchester residents and businesses, ICC	A3	<ul style="list-style-type: none"> <li>Engagement with ICC and Grandchester community to review traffic and visual amenity management measures for the construction period, and identify and implement measures to offset impacts on character</li> </ul>	A2
	The views of residents to the north of Helidon and Grantham, Laidley's east and north and Grandchester's south will be affected by the Project. Residents who can see the tunnel portals or control centre buildings may experience them as a detraction from the landscape. In combination, the Project's visual amenity impacts and rail noise are likely to be experienced as a detraction from the character of Gatton, Forest Hill and Grandchester, with some impacts on the urban fringes of Helidon, Laidley, Grantham and Calvert, and may affect the quiet rural town identity or residents' sense of place.	O	- ve	Residents, landowners and visitors, LVRC, ICC	B4	<ul style="list-style-type: none"> <li>Communication with residents who have views to the Project, including tunnel buildings, to explain the Project's construction program, operational procedures and management measures relevant to their specific concerns</li> <li>Mental health partnership</li> <li>Initiatives agreed with LVRC, ICC and community groups to support community initiatives to mitigate impacts on the character of towns</li> </ul>	B3

Inland Rail Helidon to Calvert EIS – Appendix Q: Social Impact Assessment technical report

Impact area	Impact description	Phase	Nature	Stakeholders affected	Prelim. risk	Project-specific strategies	Residual risk
Community cohesion	Community cohesion could be reduced through displacement of residents, intensification of the rail corridor as a physical barrier within and between communities, impacts on the amenity or accessibility of community facilities, or community conflict about the Project.	C&O	- ve	Residents and community organisations, LVRC, ICC	B3	<ul style="list-style-type: none"> <li>■ Social investment in community projects which strengthen cohesion and funding for community development projects</li> <li>■</li> </ul>	B2
Disadvantage	Some residents with limited resources may be displaced due to property acquisitions or removal of DTMR-owned houses, or affected by construction noise, potentially exposing them to further disadvantage.	C	- ve	Residents in and near EIS investigation corridor	C3	<ul style="list-style-type: none"> <li>■ Meeting with directly affected landowners and tenants, to identify their specific needs and concerns, and refer them to services which can support them during the relocation process</li> <li>■ Employment of engagement staff with local knowledge to work with directly affected landowners and DTMR tenants</li> <li>■ Funding for community support services that can assist residents with the relocation process</li> </ul>	C2
Connectivity	Temporary interruptions to property access and traffic delays are likely on a number of roads during construction due to construction activities and traffic, road realignments and road closures, impacting on school bus services, and accessibility for people travelling by motor vehicle, bicycle and on foot. Property accesses will also be interrupted.	C	- ve	Residents, businesses service providers and visitors QPS, QFES, QAS, LVRC, ICC, DTMR	A3	<ul style="list-style-type: none"> <li>■ Ongoing engagement with residents whose property access would be affected, and alternative property accesses provided where required</li> <li>■ Regular project updates which forecast road works, road realignments and closures, and explain alternative routes</li> <li>■ Community education strategy focussed on safety during the construction period</li> </ul>	A2

Inland Rail Helidon to Calvert EIS – Appendix Q: Social Impact Assessment technical report

Impact area	Impact description	Phase	Nature	Stakeholders affected	Prelim. risk	Project-specific strategies	Residual risk
	Road closures would result in small increases in travel times and minor inconveniences to road users, with no major disruptions to connectivity anticipated.	C&O	- ve	Road users, LVRC, ICC	A3	<ul style="list-style-type: none"> <li>Alternative access provided</li> </ul>	A2
	The closure of Gaul Street in Gatton and road network changes in Forest Hill would result in reductions in traffic connectivity however alternate crossings are available within 500 m of the road closures and pedestrian connectivity would be maintained in both locations.	C&O	- ve	Gatton residents and businesses LVRC	A3	<ul style="list-style-type: none"> <li>Reconstruction of Gatton Railway Pedestrian overbridge</li> <li>Provision of level crossings for pedestrians, cycles and motor scooters at Hunt Street and Gaul street</li> </ul>	A2
	Level crossings on public roads will result in disruptions to traffic, up to a maximum of 33 times per day at 2026, with a delay of approximately two minutes. Trains of 3.6 km may operate from 2040, with up to 46 train services per day which could result in more frequent and longer traffic delays.	O	- ve	Residents, businesses service providers, QPS, QFES, QAS,	A3	<ul style="list-style-type: none"> <li>Provision of train schedules relevant to crossings</li> <li>Access to information on train schedules provided to police and emergency services</li> </ul>	A2
	There is potential for a cumulative increase in traffic volumes during construction if multiple projects are constructed in the same timeframe.	C	- ve	LVRC, ICC, DTMR, motorists	C3	<ul style="list-style-type: none"> <li>TMP provisions for Inland Rail projects</li> </ul>	C2

Inland Rail Helidon to Calvert EIS – Appendix Q: Social Impact Assessment technical report

Impact area	Impact description	Phase	Nature	Stakeholders affected	Prelim. risk	Project-specific strategies	Residual risk
<b>Workforce</b>							
Training and development	The construction phase represents an important source of training and career development for young people and Indigenous people in the SIA study area. The Project will offer employment opportunities for people who are disadvantaged in the labour market, including young people and Indigenous people.	C	+ ve	Local residents experiencing unemployment and their families	B3	<ul style="list-style-type: none"> <li>Indigenous training partnerships and employment pathways</li> <li>Inland Rail Skills Academy</li> <li>Partnerships with Department of Education, local schools and training providers to provide job readiness and skills training to people in potentially impacted communities</li> </ul>	B4
Construction employment	Employment for up to 410 personnel and an average of 190 personnel during 2021-2026 will benefit construction industry personnel in the SIA study area and adjacent LGAs.	C	+ ve	SIA study area residents seeking employment and their families	A2	<ul style="list-style-type: none"> <li>Locally targeted training and recruitment strategies</li> <li>Requirement for contractors to target and report on employment of people in the SIA study area</li> <li>Local Employment Register</li> <li>Promotion of Project supply opportunities to businesses in the SIA study area</li> </ul>	A3
Operational employment	A workforce of approximately 15-20 personnel is expected for the Project's operation, with potential for local residents to obtain long-term employment.	O	+ ve	SIA study area residents seeking employment and their families	B1	<ul style="list-style-type: none"> <li>Partnerships to identify training pathways and programs for people in the SIA study area</li> </ul>	B2
	As part of Inland Rail, the Project would facilitate complementary private investments which may contribute to long-term employment opportunities in the SIA study area.	O	+ ve	Residents	C2	<ul style="list-style-type: none"> <li>Business capacity building training strategies</li> <li>Workforce skills development strategies</li> </ul>	C3



Inland Rail Helidon to Calvert EIS – Appendix Q: Social Impact Assessment technical report

Impact area	Impact description	Phase	Nature	Stakeholders affected	Prelim. risk	Project-specific strategies	Residual risk
Impacts on employment in other industries	Project demands, or cumulative labour demands may result in shortages in specific trades.	C	- ve	Local residents and businesses	B3	<ul style="list-style-type: none"> <li>Partnerships to identify training pathways and programs for local people</li> </ul>	B2
	Acquisition or severance of farms and/or impacts on connectivity to markets may affect productivity and the availability of employment on farms	C&O	- ve	Local workers in the agriculture sectors	C3	<ul style="list-style-type: none"> <li>Compensation for loss of legal interest in land according to the AL Act provisions</li> <li>Engagement with landowners to reduce impacts through the detailed design process</li> <li>Mitigation of Project impacts on farm infrastructure and water access</li> <li>Consultation with landowners regarding implementation of mitigation measures outlined in the draft Outline EMP</li> </ul>	C2
	Impacts on the rural character and amenity of town centres may reduce tourism visitation and trading levels, and related employment opportunities.	C	ve	LVRC, ICC, Lockyer Valley Tourism Association, Ipswich Tourist Operators' Network	B3	<ul style="list-style-type: none"> <li>Consultation with tourism-related businesses during the detailed design phase to develop a detailed understanding of how construction works may affect the amenity of or connectivity to tourism attractions, and development of mitigation measures to address impacts</li> <li>Partnership with tourism associations to develop projects to mitigate any impacts on tourism visitation</li> </ul>	B2
	There is potential for coincidental construction of multiple infrastructure projects to affect the availability of construction labour and/or cause labour to be drawn from other industries.	C	- ve	Businesses and service providers in the SIA study area	C3	<ul style="list-style-type: none"> <li>Workforce skills development strategies</li> <li>Monitoring of Inland Rail projects' cumulative demands for construction labour, and adaptive management measures if required</li> </ul>	C2

Inland Rail Helidon to Calvert EIS – Appendix Q: Social Impact Assessment technical report

Impact area	Impact description	Phase	Nature	Stakeholders affected	Prelim. risk	Project-specific strategies	Residual risk
Workforce impacts on community values	Workforce behaviour may contribute to concerns about privacy or safety, or to amenity impacts (e.g. noise).	C	- ve	Residents in or near the EIS investigation corridor	B3	<ul style="list-style-type: none"> <li>Workforce Code of Conduct</li> <li>Complaints management handling procedure</li> </ul>	C2
<b>Housing and accommodation</b>							
Settlement pattern	The disturbance footprint may affect vacant land near Helidon designated for Urban Residential land supply, future growth areas in Gatton and Laidley, and vacant lots within the Valley Vista Estate.	C&O	- ve	LVRC, ICC	A2	<ul style="list-style-type: none"> <li>Provide information which could assist Councils with the development of planning controls to reduce residential exposure to rail noise</li> <li>Negotiate compensation for acquisition of land in accordance with the AL Act</li> </ul>	B1
Population change	Acquisition of private properties and the requirement for use of DTMR properties is likely to displace an estimated 26 households, potentially resulting in a small population loss (approximately 70 people) at the local level. Changes to the regional population would be negligible.	C	- ve	Residents of properties to be acquired/removed	A3	<ul style="list-style-type: none"> <li>Facilitation of support for people who will need to relocate</li> </ul>	A2
Property values and plans	Concern about property values being negatively affected by the Project is causing stress and anxiety and may continue to cause anxiety for some residents in or near the EIS investigation corridor.	C&O	- ve	Landowners near the rail corridor	B4	<ul style="list-style-type: none"> <li>Mitigation measures provided in draft Outline EMP – Noise and vibration, air quality, traffic management, visual amenity</li> <li>Clear information about environmental management and approval conditions provided to landowners and local communities</li> </ul>	B3

Inland Rail Helidon to Calvert EIS – Appendix Q: Social Impact Assessment technical report

Impact area	Impact description	Phase	Nature	Stakeholders affected	Prelim. risk	Project-specific strategies	Residual risk
Short-term accommodation	Demand for short-term accommodation will be welcomed by accommodation providers but will need to be managed to avoid displacing other accommodation users.	C	- ve	Hotel/motel and serviced unit owners Tourists, business travellers and visitors to community events	C3	<ul style="list-style-type: none"> <li>Accommodation Management Plan</li> <li>Consultation with short-term accommodation providers to identify their capacity to accommodate personnel if required, and minimise impacts on other visitation during peak seasonal and event-related needs</li> <li>Monitoring of Inland Rail projects' cumulative demands on short-term accommodation</li> </ul>	C2
	There is potential for impacts on the amenity of accommodation provided at hotels in Gatton and Forest Hill, affecting their occupancy and potentially the owners' livelihoods.	C&O	- ve	Hoteliers in Gatton and Forest Hill, hotel staff	B3	<ul style="list-style-type: none"> <li>Work with the hotel owners to identify mitigation measures to reduce impacts on the amenity of their properties</li> <li>Encourage personnel requiring accommodation to seek hotel accommodation in Forest Hill and Gatton, and in other centres in the SIA study area, and/or Ipswich/Toowoomba</li> </ul>	B2
Affordable housing and accommodation	The Project's construction would require the removal of up to 26 houses in the EIS investigation corridor, including seven DTMR properties which are tenanted and provide affordable housing.	C	- ve	DTMR tenants, DTMR, DCHDE	A3	<ul style="list-style-type: none"> <li>Partnership with DCHDE/Laidley Crisis Care Accommodation to provide support to households needing to relocate</li> </ul>	A2
	Noise, visual and access impacts on Gatton Caravan Park will occur during construction, and noise impacts may occur during operation.	C&O	- ve	Caravan park owner and manager, agricultural businesses, seasonal workers	B4	<ul style="list-style-type: none"> <li>Consultation with caravan park owner to discuss and implement noise and dust mitigation measures</li> <li>If necessary, relocate access to the caravan park from Eastern Drive</li> </ul>	B3

Inland Rail Helidon to Calvert EIS – Appendix Q: Social Impact Assessment technical report

Impact area	Impact description	Phase	Nature	Stakeholders affected	Prelim. risk	Project-specific strategies	Residual risk
	Acquisition of land within the Gatton Caravan Park is expected to be required, with potential for a reduction in its current capacity of approximately 15 percent, and a reduction in future planned total capacity of up to 28 per cent. This would result in a reduction in the availability of affordable accommodation for seasonal farm workers in Gatton. Amenity impacts are also likely during construction, and without noise mitigation, during operation. Full acquisition is unlikely but would be determined by the Constructing Authority in cooperation with the caravan park’s owner, after gazettal of the rail corridor.	C&O	- ve	Caravan park owner and manager, agricultural businesses, seasonal workers	B4	<ul style="list-style-type: none"> <li>Cooperation with the caravan park’s owner to identify alternative sites for the caravan park in the Gatton area or nearby if full acquisition was required</li> <li>Provision of information to the Grantham Farmworkers Lodge to enable the Lodge to consider its plans for expansion</li> <li>Provision of information to nearby businesses which may be dependent on park visitors’ trade regarding the timing and extent of any reduction in capacity or loss of the caravan park</li> <li>Provision of advice to farms and agribusinesses regarding accommodation alternatives for seasonal workers.</li> </ul>	B3
Cumulative housing demand	The coincidence of several major Projects’ construction phases has potential to strain the capacity of the SIA study area’s construction labour force, with a cumulative increase in numbers of non-local personnel seeking housing, and consequent impacts on rental housing availability.	C	- ve	Low income households Residents and service providers	C3	<ul style="list-style-type: none"> <li>Local training and recruitment strategies</li> <li>Business capacity development</li> <li>Monitoring of the results of the Project’s AMP and Inland Rail projects’ cumulative demands on local housing, to identify the need for any adaptive management e.g. revision of the AMP</li> </ul>	C2

Impact area	Impact description	Phase	Nature	Stakeholders affected	Prelim. risk	Project-specific strategies	Residual risk
<b>Health and Wellbeing</b>							
Impacts on community facilities	Up to 26 community buildings, 8 medical facilities, and up to 19 educational facilities (early years education centres and schools) would experience construction noise. During operations, there may be potential triggering of investigation of noise mitigation at up to 13 non-residential sensitive receptors (in 2040). If not mitigated, impacts due to construction and operation may affect the sensitive receptors' amenity or use, and could affect the learning environment of schools, childcare centres and the UQ campus in Gatton. This could affect quality of life and community cohesion. Recreational facilities would also experience noise exposure to construction noise which may affect their use.	C	- ve	Residents in potentially impacted communities, facility owners and users, LVRC, ICC	A4	<ul style="list-style-type: none"> <li>Engagement with facility owners/managers to develop mitigation to avoid, minimise or offset impacts on the amenity of facilities</li> </ul>	B3

Inland Rail Helidon to Calvert EIS – Appendix Q: Social Impact Assessment technical report

Impact area	Impact description	Phase	Nature	Stakeholders affected	Prelim. risk	Project-specific strategies	Residual risk
	<p>Grandchester State School would experience disrupted pedestrian access during construction, construction noise, operational noise, and community concerns about pedestrian safety. This could reduce enrolment numbers and the school's resources, and with a small enrolment, could affect the school's viability over time.</p> <p>There is also potential for noise impacts during construction and operation at Forest Hill State School to affect the school's learning environment.</p>	C&O	- ve	<p>Grandchester State School and community</p> <p>Forest Hill State School and community</p> <p>Education Queensland</p>	B3	<ul style="list-style-type: none"> <li>Engagement with Education Queensland to develop mitigation to avoid, minimise or offset impacts on Grandchester State School</li> <li>Implementation of agreed mitigation measures to avoid exceedance of operational noise triggers at Grandchester State School and Forest Hill State School</li> </ul>	B2
	<p>In Gatton, Forest Hill and Grandchester, pedestrian and vehicular access between residents and community facilities on opposite sides of the Project will be interrupted. Disruption to school access routes, travel time and school bus scheduling is expected due to road realignment and construction activities, including rail-road crossing construction.</p>	C	- ve	<p>Residents, school communities and Education Queensland</p> <p>Childcare centre owners, school bus services</p>	A3	<ul style="list-style-type: none"> <li>Consultation with Education Queensland, the management authorities of private schools, childcare centres and UQ Gatton to develop and implement mitigation measures addressing impacts on connectivity, for inclusion in the CEMP</li> </ul>	B2
	<p>There is potential to disrupt access to the Helidon to Ravensborne Trail circuit along Seventeen Mile Road during construction</p>	C	- ve	Trail users, LVRC	C3	<ul style="list-style-type: none"> <li>Detailed design and construction planning will include consideration of the maintenance of access to the Helidon to Ravensborne Trail if it is expected to be affected</li> </ul>	C2



Inland Rail Helidon to Calvert EIS – Appendix Q: Social Impact Assessment technical report

Impact area	Impact description	Phase	Nature	Stakeholders affected	Prelim. risk	Project-specific strategies	Residual risk
	Increased frequency of audible rail noise for schools and kindergartens in Gatton, Grandchester, Forest Hill and Laidley may distract students.	O	- ve	School communities and Education Queensland	C3	<ul style="list-style-type: none"> <li>Evaluation of noise modelling result with Department of Education, private school owners and childcare/kindergarten owners to identify the need for any further mitigation</li> </ul>	C2
	Facilities that would be impacted by land requirements, noise and/or traffic access disruption include: <ul style="list-style-type: none"> <li>School Road Reserve and Grandchester Community Hall</li> <li>Apex Park, Gatton</li> <li>Wilks Park, Gatton</li> <li>Gatton Bowls Club and Littleton Park, Gatton</li> <li>Gatton Showground</li> <li>Forest Hill Recreation Reserve, Community Hall and Furley Park</li> </ul>	C	- ve	LVRC, ICC, Park and facility users	B3	<ul style="list-style-type: none"> <li>Investment in the amenity, accessibility and quality of community facilities in impacted communities</li> <li>LVRC and ICC partnerships to identify opportunities to enhance parks to compensate for loss of park land</li> </ul>	B2
	Periodic noise from passing trains may impact on the amenity of Furley Park, Grandchester Community Hall, Forest Hill Community Hall, Wilks Park and the Move and Groove Dance School.	O	- ve	Park and facility users, community organisations	B3	<ul style="list-style-type: none"> <li>Investment in the amenity, accessibility and quality of community facilities in impacted communities</li> </ul>	B2
	There are community concerns about the potential for risks to pedestrian safety for children and seniors at level crossings.	O	- ve	School communities, seniors and other community members	B4	<ul style="list-style-type: none"> <li>Rail, pedestrian and traffic safety education campaign, including targeted communications for school, kindergarten and childcare centre communities</li> </ul>	C3

Inland Rail Helidon to Calvert EIS – Appendix Q: Social Impact Assessment technical report

Impact area	Impact description	Phase	Nature	Stakeholders affected	Prelim. risk	Project-specific strategies	Residual risk
Churches	There is a potential for the Christian Life Centre in Gatton to be adversely impacted by the Project, dependent on detailed design and consultation with the Church, which may potentially displace this congregation.  There is also potential for construction noise exceedances or disruptions to local roads to affect the amenity of or access to churches in Helidon, Gatton, Forest Hill, and Grandchester, which may affect their use.	C	- ve	Church leaders and congregations	B3	<ul style="list-style-type: none"> <li>Mitigation measures provided in draft Outline EMP – Noise and vibration, air quality, traffic management</li> <li>Engagement with Christian Life Centre in Gatton to identify mitigation options if required</li> <li>Engagement with leaders of other churches potentially affected by noise regarding mitigation measures to reduce impacts, and implementation of agreed mitigation measures</li> </ul>	B2
	There is potential for operational noise exceedances to affect the amenity and use of churches.	O	- ve	Christian Life Centre and New Hope Church in Gatton, Laidley Baptist Church in Laidley, St. Peter's Catholic Church in Grandchester	B3	<ul style="list-style-type: none"> <li>Mitigation measures provided in draft Outline EMP – Noise and vibration</li> <li>Engagement with leaders of noise affected churches to identify and implement mitigation measures</li> </ul>	B2
Health and community support services	Increased stress and anxiety are likely to require an increase in community support and mental health services.	C	- ve	Residents. Community and government agencies	A3	<ul style="list-style-type: none"> <li>Funding for community organisations to provide emotional and practical support</li> <li>Delivery of ARTC's mental health partnership program in the SIA study area</li> </ul>	A2
	Construction personnel may require occasional access to local health services for treatment of injuries.	C	- ve	Darling Downs and West Moreton HHS, local health services	C3	<ul style="list-style-type: none"> <li>Prior advice and updates to Darling Downs and West Moreton HHS on workforce ramp-up and the nature of injuries which may be experienced by rail construction personnel</li> </ul>	C2

Inland Rail Helidon to Calvert EIS – Appendix Q: Social Impact Assessment technical report

Impact area	Impact description	Phase	Nature	Stakeholders affected	Prelim. risk	Project-specific strategies	Residual risk
	Project-related traffic in Gatton may worsen the current congestion which inhibits access to the hospital during peak school traffic hours.	C	- ve	Gatton Hospital, QAS and hospital patients and visitors, hospital staff	C4	<ul style="list-style-type: none"> <li>Consult with Darling Downs and West Moreton HHS to identify the potential for Project impacts on hospital access and include mitigation in the CEMP</li> </ul>	C2
Police and emergency services	The Project would result in increased demands on police services in relation to the need for traffic policing, traffic control assistance, oversized vehicles escorts, liaison with the Project e.g. in relation to thefts, and community policing with respect to community stress or conflict. Protests against major projects are also a major drain on police resources.	C	- ve	QPS, QAS, QFES	A3	<ul style="list-style-type: none"> <li>Early and close cooperation with QPS to develop cooperative arrangements</li> <li>Regular liaison to monitor and address issues affecting community or traffic safety</li> </ul>	A2
	The Project may increase the risk of road/rail accidents, potentially creating additional demand on health and emergency services. Responses to any major incidents would place a significant demand on police and emergency resources.	O	- ve	QPS, QAS, QFES, State Emergency Service (SES)	C5	<ul style="list-style-type: none"> <li>Cooperation with QPS, QAS, SES and QFES to agree emergency response protocols</li> <li>Regular liaison to monitor and address issues affecting community or traffic safety</li> </ul>	C3
	Residents are concerned that Project works would interrupt the connectivity of fire trails and access tracks.	C&O	- ve	QFES, rural fire brigades, rural residents	C3	<ul style="list-style-type: none"> <li>Consultation with the QFES and local rural fire brigades to identify the location of access tracks, and measures required to ensure continued access</li> </ul>	D3

Inland Rail Helidon to Calvert EIS – Appendix Q: Social Impact Assessment technical report

Impact area	Impact description	Phase	Nature	Stakeholders affected	Prelim. risk	Project-specific strategies	Residual risk
	Accessibility for emergency services will be delayed at road crossing and road re-alignment construction sites, and when encountering oversized vehicles on roads. During operations, emergency vehicles will be delayed at level crossings when encountering a passing train, increasing response times.	C&O	- ve	Ambulance, police and fire service providers, residents and landowners	A4	<ul style="list-style-type: none"> <li>Development of communication protocols supporting Project responses (such as provision of alternative access across the rail corridor) and enabling services to plan around interruptions</li> </ul>	A3
Physical health and environment	The assessment of rail noise determined that there were up to 285 individual receptors where the predicted noise levels were above the adopted trigger levels, with the potential to cause noise intrusion. If not mitigated, operational rail noise may impact on the health and wellbeing of households where noise and/or vibration exceed adopted thresholds.	O	- ve	Residents and businesses near the EIS investigation corridor	C4	<ul style="list-style-type: none"> <li>Mitigation measures provided in draft Outline EMP – Noise and vibration, and may include at property treatment, air conditioning, transmission control or other dwelling/property modifications, to be confirmed in the detailed design phase</li> </ul>	D4
	Rail noise within adopted trigger levels may cause stress or other health issues for people who are sensitive to noise or opposed to the Project's location.	O	- ve	Residents and businesses near the EIS investigation corridor	B4	<ul style="list-style-type: none"> <li>Complaints mechanism</li> <li>Council or State Government review of current land use planning controls in affected areas may be required</li> </ul>	B3

Inland Rail Helidon to Calvert EIS – Appendix Q: Social Impact Assessment technical report

Impact area	Impact description	Phase	Nature	Stakeholders affected	Prelim. risk	Project-specific strategies	Residual risk
	Some residents are anxious about potential risks to human health from diesel emissions and/or coal dust. Air quality assessment indicates that the Project's operation poses a low risk of human health impacts after mitigation measures are implemented, however residents are likely to remain concerned about potential air quality impacts including in relation to the operation of the Little Liverpool tunnel.	O	- ve	Residents living near rail corridor, including the Little Liverpool tunnel	C3	<ul style="list-style-type: none"> <li>Mitigation measures provided in draft Outline EMP – Air quality</li> <li>Requirement for mitigation to coal transport wagons</li> <li>Community information about tunnel operation and ventilation</li> <li>Community information about air quality assessment results</li> <li>Complaints process</li> </ul>	C2
	Dwellings are located near crossing loops in Helidon, Gatton, Laidley and Calvert, leading to concern about noise impacts and diesel emissions. Noise modelling and air quality assessment indicates that the Project could operate with no adverse health effects.	O	- ve	Residents near crossing loops	C3	<ul style="list-style-type: none"> <li>Measures provided in draft Outline EMP - Air quality, noise and vibration</li> </ul>	D2
Mental health	The Project is likely to affect local residents' mental health through stress and anxiety relating to property acquisitions, concern for the safety of vulnerable community members, fears about noise and vibration impacts, and/or visual impacts impacting on sense of place.	C&O	- ve	Residents and business owners in potentially impacted towns, rural residential areas and agricultural landowners	B4	<ul style="list-style-type: none"> <li>Transparent and accessible information about the property acquisition process and Project impacts</li> <li>Ongoing engagement with landowners who are adjacent to the corridor throughout construction</li> <li>Mental health partnerships</li> </ul>	B3
	Concerns about the Project's potential to exacerbate flooding is contributing to stress and anxiety in the potentially impacted communities.	C&O	- ve	Residents in potentially impacted towns, rural residential areas and rural properties	C3	<ul style="list-style-type: none"> <li>Ongoing engagement with community members regarding the results of the Project's flooding and hydrology assessment during the detailed design phase</li> </ul>	C2

Inland Rail Helidon to Calvert EIS – Appendix Q: Social Impact Assessment technical report

Impact area	Impact description	Phase	Nature	Stakeholders affected	Prelim. risk	Project-specific strategies	Residual risk
						<ul style="list-style-type: none"> <li>Measures provided in draft Outline EMP - Hydrology</li> </ul>	
	The Project would provide construction employment opportunities for SIA study area residents, potentially supporting mental health. During operation, personnel may include SIA study area residents with access to long-term employment.	C&O	+ ve	Residents, especially jobseekers	A2	<ul style="list-style-type: none"> <li>Local training and development pathway programs</li> </ul>	A3
	The Project would increase the opportunity for rail-based suicide. This would be heightened in communities where trauma levels are high (such as in disadvantaged communities).	O	- ve	Residents who are vulnerable to mental health issues, emergency responders, mental health service providers, Darling Downs and West Moreton HHS	C5	<ul style="list-style-type: none"> <li>Restricting access to the rail line</li> <li>Mental health partnership program including suicide prevention</li> <li>Telephone-based support service</li> </ul>	D5
Community safety	The location of work sites and laydown areas near private homes may engender anxiety about perceived personal and property safety.	C	- ve	Residents near the alignment and laydown areas	B2	<ul style="list-style-type: none"> <li>Identification of local values incorporated in ARTC’s workforce Code of Conduct for all personnel</li> <li>Agreements with residents for property access are articulated in the requirements for the Contractor</li> </ul>	C2



Inland Rail Helidon to Calvert EIS – Appendix Q: Social Impact Assessment technical report

Impact area	Impact description	Phase	Nature	Stakeholders affected	Prelim. risk	Project-specific strategies	Residual risk
Traffic safety	Large and over-size vehicles, and increased traffic may increase the risk of road accidents and demands on emergency services.	C	- ve	Road users QPS, QFES, QAS, LVRC, ICC, DTMR	B3	<ul style="list-style-type: none"> <li>Measures in the draft Outline EMP – traffic management</li> <li>Community safety programs with a focus on traffic safety during construction</li> </ul>	B2
Road-rail safety	Collisions between trains and motorists, cyclists and pedestrians may occur.	O	- ve	Motorists, cyclists and pedestrians, QPS, QFES, QAS, LVRC, ICC, DTMR	C5	<ul style="list-style-type: none"> <li>ARTC’s community safety programs will include a focus on safety relating to pedestrian, stock and vehicle interactions with the rail corridor</li> </ul>	D5
Hazards	Incidents related to dangerous goods transport, trespass, pedestrian and community safety, interface with live trains, derailment and impediments to emergency access are possible.	C&O	- ve	Residents, motorists, QPS, QFES, QAS)	C5	<ul style="list-style-type: none"> <li>Measures in the draft Outline EMP - Hazard mitigation to be applied throughout the Project’s life</li> </ul>	D5
<b>BUSINESS AND INDUSTRY</b>							
Agricultural businesses	The Project will have direct impacts on grazing and cropping properties including loss of productive land, impacts on property infrastructure and connectivity, and potential to in ease of property management and maintenance. Analysis of land take indicates that one freehold grazing property and one freehold horticultural property would be fully acquired, and additional agricultural properties may be fully acquired depending on the results of ongoing consultation with landowners.	C&O	- ve	Agricultural producers	A3	<ul style="list-style-type: none"> <li>Consultation with landowners to develop property-specific interface agreements where relevant</li> <li>Compensation in accordance with the AL Act and/or lease and licensing agreements</li> <li>Property-specific cross-corridor access arrangements</li> <li>Landholder liaison staff with local knowledge</li> <li>Make good arrangements where required for loss or dewatering of bores</li> </ul>	A2

Inland Rail Helidon to Calvert EIS – Appendix Q: Social Impact Assessment technical report

Impact area	Impact description	Phase	Nature	Stakeholders affected	Prelim. risk	Project-specific strategies	Residual risk
	The safety of cattle and horses may be impacted if stock wander on to the rail line.	C&O	- ve	Graziers and other stock owners	B3	<ul style="list-style-type: none"> <li>Property-specific agreements regarding fencing and stock movements</li> </ul>	C2
Town centre businesses	Construction would result in noise and traffic disruption impacts on the Gatton and Forest Hill town centres, affecting the amenity of businesses and potentially deterring local customers and visitors. Some businesses in Gatton and Forest Hill are likely to be significantly affected by construction noise, dust, and access disruptions. The amenity of the Furley Park community market is also likely to be affected. A number of businesses near the corridor would also be exposed to rail noise impacts.	C&O	- ve	Business owners and staff, customers	A4	<ul style="list-style-type: none"> <li>Measures in the draft Outline EMP – Noise and vibration, traffic, air quality</li> <li>Work with business operators to reduce the potential for impacts on their amenity and access</li> <li>Require Contractors to use businesses in impacted communities in their supply chain</li> <li>Business capacity building strategies</li> </ul>	B3
	The closure of Gaul Street in Gatton will reduce connectivity to the town centre. Changes to the road network in Forest Hill to accommodate the Project would also result in reduced traffic on Victoria Road, potentially affecting trade levels.	C&O	- ve	Business owners and staff, customers	A3	<ul style="list-style-type: none"> <li>Close consultation with local businesses to refine mitigation measures and develop marketing or business capacity development strategies</li> </ul>	A2
Impacts on labour access	There is potential for cumulative demands for labour to draw tradespeople and professional staff from within local communities, affecting the availability of tradespeople and other personnel.	C	- ve	Businesses and residents	C3	<ul style="list-style-type: none"> <li>Local training and employment pathway programs</li> <li>Business capacity building strategies</li> </ul>	C2

Inland Rail Helidon to Calvert EIS – Appendix Q: Social Impact Assessment technical report

Impact area	Impact description	Phase	Nature	Stakeholders affected	Prelim. risk	Project-specific strategies	Residual risk
Impacts on tourism businesses	Impacts on tourism businesses would include impacts on the amenity of the hotels, cafes and speciality shops in Forest Hill and Gatton, and potential for road works and construction sites to affect tourists' experience. Some visitors will see the Project as diminishing the rural character and views to the Lockyer Valley, but others will find interest in Project structures.	C&O	- ve	Business owners and staff, customers	B3	<ul style="list-style-type: none"> <li>Consult with tourism associations and Councils to develop a strategy, to ensure that generalised impacts on tourism values are reduced wherever possible.</li> <li>Work with the Lockyer Valley Tourism Association and the Ipswich Tourist Association to support their promotional and marketing campaigns</li> </ul>	B2
Facilitation of industrial development	The Project facilitates the growth of industries associated with logistics and freight terminal hubs, supporting the establishment of businesses which will be a source of long-term employment for SIA study area residents.	O	+ ve	Businesses in the SIA study area, job seekers	B3	<ul style="list-style-type: none"> <li>None required</li> </ul>	B3
Local supply opportunities	The Project will provide opportunities for local and regional businesses to participate in its supply chain. It is also likely that businesses would benefit from increased trade from the construction workforce.	C	+ ve	Local businesses	A2	<ul style="list-style-type: none"> <li>AIP Plan</li> </ul>	A3
	The operational phase would offer service and supply contracts over the long-term and could involve businesses in the SIA study area.	O	+ ve	Local businesses	B3	<ul style="list-style-type: none"> <li>AIP Plan</li> </ul>	B4

## 10 Conclusions

This section summarises the Project's residual social impacts and benefits identified in the SIA and describes distributional equity, which refers to the effect of differing impacts across communities, areas and time.

### 10.1 Distributional equity

As for all major projects located near communities, negative impacts are more likely to be experienced by those living closest.

The Project will require extensive construction works, and, with potential for impacts on directly affected landowners, adjacent landowners, other residents, farms, businesses and community and government services.

Distributional equity considerations for the Project include:

- An estimated 26 households within the disturbance footprint would need to relocate to enable the Project's construction, including approximately seven tenants in affordable housing owned by DTMR
- Gatton, Forest Hill and Grandchester would experience impacts on the amenity of their towns due to construction and in the longer term, intensification of the rail corridor and increased movement of freight
- The amenity of rural residential areas in the Lockyer Valley and on the urban fringes of Helidon, Grantham, Laidley and Calvert may be affected during construction
- The Project travels near areas with 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 landowners adjust to land acquisition impacts
- Residents living near the disturbance footprint would experience noise, travel delays and changes to local character during construction
- The Project would involve a significant freight route through rural areas with potential for rail noise to affect amenity in proximity to the rail corridor.
- Project benefits are likely to accrue at the local and regional levels during construction, in relation to employment of residents and involvement of businesses in the SIA study area.

Adaptation to the Project's operation is likely to take time, and there is potential for Project operations to have long-term effects on amenity (primarily through rail noise) and connectivity near the rail corridor.

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.

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.

The Project is part of Inland Rail, a larger project which will make a strong contribution to regional, State and national development for the long-term. Potential Project benefits and opportunities include:

- The construction phase represents an important source of training and career development for residents in the SIA study area
- Employment for up to 410 personnel will benefit construction industry personnel in the SIA study area and adjacent LGAs, including people who are disadvantaged in the labour market
- Opportunities for local and regional businesses to participate in the Project’s supply chain during construction, and the likelihood of increased trade from construction workforce expenditure
- Long-term service and supply contracts during operation which could benefit businesses in the SIA study area
- Facilitation of the growth of industries associated with logistics and freight terminal hubs, and improved accessibility to markets for businesses in the region.

## 10.2 Residual risks

Residual risks to social values were identified in Table 9-3. Residual risks which are possible, likely or almost certain, and of moderate or major consequence are shown in Table 10-1, along with measures to address residual risks.

These measures, along with the actions and monitoring framework outlined in Section 8, are expected to reduce the potential for residual impacts on community values, the availability of affordable accommodation, community wellbeing and safety, and the amenity of town centre businesses.

**Table 10-1 Potential residual impacts of moderate or major consequence**

Social conditions	Potential residual impact	Measures to address residual impacts
Community values	The Project will introduce additional linear infrastructure to the landscape, contributing to 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 Traditional Owners may identify projects or initiatives to strengthen their connection to country and/or community recognition of their connection to Country.
	Construction noise would be mitigated in accordance with approval conditions but may be intrusive on the amenity of homes, outdoor spaces and community facilities. This would be temporary as works move along the corridor but would last for longer periods near bridge and laydown areas.	The Project will communicate with landowners within 500 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.
	The amenity of Gatton, Forest Hill and Grandchester will be impacted by construction works.	The Project will provide support for community initiatives to build resilience and community participation in potentially impacted communities.

Social conditions	Potential residual impact	Measures to address residual impacts
	Operational noise exceedances would be mitigated in accordance with measures outlined in the draft Outline EMP but may be experienced by nearby residents as intrusive or stressful.	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.
	Impacts on landscape and visual amenity would be mitigated in accordance with approval conditions but distress about changes to the character of Gatton, Forest Hill and Grandchester and/or the impact of elevated structures or embankments on the scenic character may continue during operations.	Initiatives will be agreed with LVRC, ICC and community groups to support community initiatives to mitigate impacts on the character of towns.  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.
Housing and accommodation	The requirement for land acquisition within Gatton Caravan Park’s operations would result in reduced capacity. Amenity impacts relating to construction noise and a change to the character of the area around the park are also likely during construction.	The Project will engage with the caravan park owner based on the detailed design to discuss and implement measures to reduce impacts on the caravan park’s amenity. Management measures to address the reduction in capacity are being developed as part of ongoing engagement with stakeholders including the caravan park owner and LVRC and will be identified in the final EIS documentation.  Full acquisition of the caravan park is not anticipated but would require measures to offset the loss of short-term accommodation for seasonal farm workers if this occurred.
Community wellbeing	Community, educational and recreational facilities would experience construction noise which if not mitigated, may affect their amenity or use, and affect quality of life and community cohesion.	The Project will engage with facility owners/managers to develop mitigation to avoid, minimise or offset impacts on the amenity of facilities and adaptive management of impacts.
	During operations, any accidents associated with derailments, in-tunnel incidents such as fire, rail load loss, hazardous goods spills or other major incidents would place significant demands on health and emergency services resources.	Measures to address hazards and risks to safety are identified in the draft Outline EMP.  The Project will continue its cooperation with QPS, QAS and QFES during operations to monitor and mitigate any hazards or risks to safety.
	There are community concerns about the potential for risks to pedestrian safety for children and seniors at level crossings.	ARTC will deliver ongoing safety education campaigns targeting children, seniors and motorists in local communities.
	The Project may increase the risk of road/rail accidents, potentially creating additional demand on health and emergency services.	The Project will maintain cooperation with QPS, QAS and QFES to agree emergency response



Social conditions	Potential residual impact	Measures to address residual impacts
		protocols, along with regular liaison to monitor and address issues affecting community or traffic safety.
	Accessibility for emergency services may be delayed by road works or construction traffic. During operations, emergency vehicles will be delayed at level crossings when encountering a passing train, increasing response times.	The Project will develop communication protocols supporting Project responses (such as provision of alternative access across the rail corridor) and enabling services to plan around interruptions.
	The Project is likely to affect local residents' mental health through stress and anxiety relating to property acquisitions, concern for safety and fears about impacts on amenity and sense of place.	The Project will maintain ongoing engagement with landowners who are adjacent to the disturbance footprint throughout construction.  The Project will monitor the adequacy of services supported through the mental health partnership and increase resources if this need is indicated by monitoring data.
<b>Safety</b>	Incidents related to dangerous goods transport, trespass, pedestrian and community safety, derailments and impediments to emergency access are possible and could affect community safety.	Arrangements with QPS, QAS and QFES will enable cooperative responses to any incidents and monitoring of any specific safety risks to enable corrective action if required.
	Large and over-size vehicles, laydown and bridge construction sites and increased traffic may increase the risk of road accidents and demands on emergency services.	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.
	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.
<b>Business and industry</b>	Construction would result in impacts on the amenity of the hotels, cafes and speciality shops in Forest Hill and Gatton, and there is potential for road works and sites to affect tourists' experience.	The Project will consult with tourism associations and Councils to develop a strategy, to ensure that generalised impacts on tourism values are reduced wherever possible.

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