APPENDIX Y

Economic Impact Assessment

BORDER TO GOWRIE REVISED DRAFT ENVIRONMENTAL IMPACT STATEMENT

Inland Rail is a subsidiary of
Australian Rail Track Corporation

INLAND RAIL

Contents

Summary

Introduction

The following economic impact assessment (EIA) report has been prepared to identify potential economic impacts of the proposed Inland Rail Program - Border to Gowrie Project (the Project), which forms part of the Inland Rail Program (Inland Rail). Inland Rail is a direct interstate freight rail corridor, approximately 1,700 kilometres (km), between Melbourne and Brisbane via central-west New South Wales and Toowoomba, Queensland.

The purpose of this EIA is to form part of an Environmental Impact Statement (EIS) being prepared by ARTC to address the Terms of Reference (ToR) issued by the Coordinator-General under the *State Development and Public Works Organisation Act 1971* (*SDPWO Act*) and for the purposes of the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) (*EPBC Act*). On 9 April 2018, the Commonwealth Minister for the Environment and Energy determined that the Project is a 'controlled action' under the *EPBC Act*.

Following the public notification period for the draft EIS, this EIA also addresses request for information (RFI) requirements from the Office of the Coordinator-General (the Coordinator-General). This includes revised economic impacts and associated mitigation measures resulting from a revised reference design.

Specifically, this assessment:

- Establishes the **existing economic environment and local context** to understand the local economic context and form the basis to measure the economic impacts;
- Identifies potential **economic benefits and impacts** on affected local and regional communities and businesses. This will be drawn from local community consultation and industry engagement undertaken by ARTC, evaluation of publicly available information, and the outputs from the Social Impact Assessment, and Land Use and Tenure Assessment;
- Assesses the projected economic benefits of the Project, including the basis for their estimation through a detailed economic benefits assessment. The outcomes of the benefits analysis (segment-specific) will be contextualised in relation to the results of the cost-benefit analysis (CBA) conducted for the entire Inland Rail Program, as outlined in the *Inland Rail Programme Business Case (2015)*;
- Assesses the economic significance of the Project on the regional, State and national economies through **computable general equilibrium modelling (CGE)**;
- Evaluates the potential **cumulative impacts** on local and regional economies resulting from the construction and operation of related projects, including adjacent Inland Rail project sections; and
- Proposes measures to enhance economic benefits and to avoid, mitigate or manage adverse economic impacts.

ARTC lodged the draft EIS with the Coordinator-General in 2021. Since that time, the revised reference design for the Border to Gowrie Project alignment has been revised in response to engagement with key stakeholders (including landowners, communities, Contractors, Councils and the State Government), assessment of field verified survey data and review of design optimisation opportunities. The reference design change has enabled ARTC to optimise horizontal and vertical rail alignments and road and rail interfaces along the Project alignment. The revised alignment still meets the fundamental requirements as outlined in the *Inland Rail Programme Business Case (2015)*, whilst minimising the potential impacts on the community and receiving environment.

Construction schedules and durations assumed for the purposes of EIS technical assessments have been based on information available at the time of assessment and are subject to change.

Impact assessment area

The Project traverses two local government areas (LGAs) – Goondiwindi and Toowoomba. Combined, these LGA boundaries form the **impact assessment area** which represents a local catchment for workers and economic activity.

For the purposes of the regional impact analysis, the **regional economic catchment area** is defined as the Australian Bureau of Statistics (ABS) labour market region boundaries of the Australian Statistical Geography Standard that captures the regional economy within which the Project is located. The Project is located within the Darling Downs – Maranoa labour market region and, accordingly, this region is defined as the regional economic catchment.

This EIA also acknowledges the proximity of the Project to regional communities in northern New South Wales, particularly within the Moree Plains and Gwydir LGAs at the southern extent of the Project alignment.

Baseline and impact assessment

Existing labour market conditions

The most recent national unemployment statistics indicate that in June 2023, the unemployment rate was 2.9 per cent in the Darling Downs – Maranoa region, slightly below the national and State historically low rates of 3.3 per cent and 3.7 per cent respectively. [1]

From March 2020, the COVID-19 global pandemic and public health crisis resulted in a significant reduction in income, a rise in unemployment, and disruptions in the transportation, service, and manufacturing industries. The impacts of the pandemic resulted in the unemployment rate in the Darling Downs – Maranoa region peaking at at 6.8 per cent in the December 2021 quarter, a 2.2 per centage point increase from December 2020..

As the Australian economy continues to respond to the impacts of the COVID-19 pandemic, rising inflation, in part caused by labour tightness, has caused the Reserve Bank to increase interest rates. Continued and sustained increases in interest rates have the potential to deteriorate labour market conditions if the economy begins to decline. As such, current labour market conditions remain unpredictable.

Railway construction labour availability

Despite the high demand for specialist construction workers over the last five years, railway track construction wage costs as a share of revenue have fallen to account for 23.3 per cent of railway track construction industry revenue in 2022-23. In comparison, wages in the broader construction industry account for only 18.6 per cent of revenue. Industry employment in the railway track construction industry has more than doubled over the last five years reflecting new competitors in the market attracted to major rail projects. [2, 3]

Record levels of activity are expected over the next two years (2023-24) in the railway track construction industry, off the back of landmark rail projects in most capital cities (e.g. Melbourne Metro, Sydney Metro, Canberra Metro and Cross River Rail). While industry performance is expected to be high, a staged approach to project completion means the industry will experience substantial revenue volatility. Demand for railway construction labour is expected to be high over this time. [4, 5]

Employment by industry

The sectoral distribution of employment for local residents varies between Goondiwindi and Toowoomba LGAs that form the impact assessment area, reflecting the diverse land use and the geographic distribution of the population across the two impacted LGAs.

[1] ABS, *Labour Force Survey*, cat. no. 6291.0.55.001. Released June 2022.
[2] Kelly, A. (2023, June). IBISWorld *Australia Industry (ANZSIC) Report E: Construction in Australia.*
[3] Kelly, A. (2023, June). IBISWorld *Australia Specialized Industry Report OD5135: Railway Track Construction in Australia.*
[4] Kelly, A. (2023, June). IBISWorld *Australia Industry (ANZSIC) Report E: Construction in Australia.*
[5] Kelly, A. (2023, June). IBISWorld *Australia Specialized Industry Report OD5135: Railway Track Construction in Australia.*

In Goondiwindi, Agriculture, Forestry and Fishing is the largest industry of employment, accounting for nearly one-third of all jobs in the area (1,251 jobs). Within this industry, most workers are employed in the Sheep, Beef Cattle and Grain Farming sector (806 persons).

In Toowoomba, the largest proportion of workers are employed in service-based industries, such as Health Care and Social Assistance (20.1 per cent), Education and Training (11.5 per cent) and Retail Trade (9.9 per cent).

There are a number of residents within the impact assessment area employed in directly relevant industry sectors and occupations to support the construction of the Project. According to the 2021 Census, 8.7 per cent of the total workforce are employed in the Construction industry (7,049 workers), with the largest proportion of workers residing in Toowoomba (6,686 workers). Within the Construction industry, 10.9 per cent of local workers are employed in Heavy and Civil Engineering construction (766 workers).

The primary occupations of employment within the impact assessment area reflect the area's industry profile and distribution of employment across industries. Within Goondiwindi, the largest proportion of workers are employed as Farmers and Farm Managers (12.4 per cent), followed by Farm, Forestry and Garden Workers (6.4 per cent). This reflects the area's industry strength in Agriculture, Forestry and Fishing. In Toowoomba, the largest proportion of workers are employed as Carers and Aides (7.6 per cent), Sales Assistants (6.3 per cent) and Health Professionals (6.2 per cent). Across the impact assessment area, 1,041 workers were employed as Construction Labourers or Mining Labourers (1.3 per cent).

Workforce profile

Direct employment resulting from the construction and operation of the Project has been estimated based on the indicative construction schedule and component activities. Pre-Construction Activities and Early Works on the Project are scheduled for commencement in mid-2024, with construction expected to be completed in early-2028.[7] The Project is anticipated to require an average workforce of 383 full-time equivalents (FTE) construction personnel with a peak of approximately 900 FTE around week 80, and between 10 to 15 FTE personnel once operational.

Furthermore, the industrial and consumption effects of the Project will result in the creation of indirect jobs, both due to upstream and downstream linkages between the Project's activities and the rest of the economy, such as the stimulation of businesses further up the supply chain (e.g. manufacturers and suppliers of industry inputs), and the stimulation of activities downstream (e.g. through the provision of inputs to other sectors and the expenditure patterns of employees).

Overall, the Project has a significant opportunity to support local employment. At the time of construction, local employment is dependent on a number of factors, including labour market conditions, skills availability, and the existence of workforce training and participation programs to support local, Indigenous and youth employment.

The Project will underpin its planning with the minimum participation targets set by relevant Commonwealth and Queensland policy. Where policy benchmarks do not exist, minimum targets have been set with consideration for baseline labour and supply chain conditions, likely cumulative demand and competition for roles or supply at the time of Project construction, and key stakeholder inputs. The Project will drive outcomes toward aspirational or incentivised targets with Contractors to exceed these minimum benchmarks.

The Project is committed to a minimum local employment target of 15 per cent and 11 per cent female participation target for the Construction Works stage. These targets stagehave considered the baseline labour conditions, likely cumulative demand and competition for roles or supply at the time of Project construction, and input from key stakeholder consultation.

While the risks of labour shortages are high, the deterioration in the Darling Downs – Maranoa labour market observed in recent statistics indicates opportunities for recruiting, training and re-skilling available workforce in the region to supply a portion of the workforce requirements of the Project. However, in both a national and

State context, the Project will be completed in a relatively tight labour market, particularly for specialist skilled jobs, which may impact the ability of the broader workforce to support the delivery of the Project.

The ability of the local economy to supply labour to the Project depends on the specific location of works along the alignment. At the southern extent of the Project alignment, workers may be drawn from the surrounding local and regional communities, including across the New South Wales State border. At the northern extent, labour supply is likely to be sourced locally within the Toowoomba region. Along the alignment, labour supply may be sourced from the local or broader economy due to the proposed establishment of non-resident workforce accommodation facilities near Inglewood and Yelarbon (with a third facility proposed in the Millmerran region).

Youth employment

The Project represents a source of potential training and career pathway development for young people in the impact assessment area. As detailed in the Social Impact Assessment (Appendix X), local training agencies and some local secondary schools have a strong interest in the potential for the Project to create employment for local residents. TAFE has also expressed interest in early information to guide student direction and potential new certifications. ARTC has engaged with TAFE, training agencies including JobActive (an Australian Government service connecting employers and jobseekers) and local employment agencies to describe the civil construction skills required and to discuss the timing for construction. ARTC has also established the Inland Rail Skills Academy to help create opportunities for education, training, skills development, and employment for communities along the Inland Rail alignment.

Indigenous employment

The Project offers the potential to increase Indigenous employment and create business opportunities. Consultation with Traditional Owners undertaken by ARTC has indicated strong interest in employment opportunities for Indigenous people with the Project and emphasised the need for early engagement with Indigenous communities so that people can be job ready.

The Inland Rail's tender assessment criteria includes local and first nations participation as a key element of all construction tender assessments. The minimum Indigenous procurement and employment participation targets, in accordance with the *Commonwealth Indigenous Procurement Policy*, are based on three per cent of the Australian-based workforce of the Contractor being Indigenous Australians, on average over the initial term of the contract. The Project will aspire to a target of four per cent Indigenous employment.

The draft *Social Impact Management Plan* (SIMP) specifies that ARTC commits to ongoing engagement with Indigenous communities, families, and Elders to support Indigenous employees, underpinned by a high level of coordination between contributing programs and agencies (see Appendix X: Social Impact Assessment .

Local businesses and industry

Agriculture

The Darling Downs – Maranoa region is one of Queensland's most fertile and productive agricultural areas, positioned on the western slopes of the Great Dividing Range and traversing the Condamine River catchment. In 2020-21, the gross value of agricultural production in the Darling Downs – Maranoa region was $3.59 billion, representing 24.7 per cent of the total gross value of agricultural production in Queensland ($14.6 billion).

The construction and operation of the Project have the potential to impact farming operations and general agricultural uses across the impact assessment area. These potential impacts include:

- Loss of agricultural land;
- Acquisition of land used for intensive livestock operations;
- Disruption to access and infrastructure;
- Disruption to stock and product movement;
- Flood inundation; and

- Improvements in supply chain efficiency.

Consultation with landholders is ongoing to further determine potential impacts as the Project progresses through detailed design. Details on consultation undertaken for the Project are included within Appendix E: Consultation Report.

Loss of agricultural land

As detailed in the Chapter 8: Land Use and Tenure, the Project will result in the sterilisation of productive agricultural land within the permanent disturbance footprint.[8] Productive land that is mapped within the existing South Western System and Millmerran Branch Line rail corridors has previously been sterilised and has therefore been excluded from the below assessment.

The scale of the total loss (within the permanent disturbance footprint) of productive agricultural land is anticipated to be low. A total of 1,600 ha of land within the permanent disturbance footprint (outside of existing rail and road corridors) that is classified as Class A (1,526 ha) or Class B (74 ha) agricultural land will be sterilised. These areas are primarily used for grazing and cropping, as well as some irrigated cropping and irrigated perennial horticulture uses. In addition, approximately 1,438 ha of land classified as IAA is within the permanent disturbance footprint.

Within the temporary footprint, there is approximately 597 ha of land classified as Class A agricultural land and 8 ha of Class B agricultural land, equating to a total of 605 ha of land that will be temporarily used during the Construction Works stage of the Project. These areas are primarily used for grazing activities. Approximately 390 ha of land within the temporary footprint is also within an IAA.

At a local government level, within Goondiwindi, the permanent disturbance footprint traverses 245 ha of Class A land (0.02 per cent) 6 ha of Class B land (0.19 per cent), and 140 ha of Border Region IAA land (0.01 per cent). Within Toowoomba, the permanent disturbance footprint traverses 1,281 ha of Class A land (0.17 per cent), 68 ha of Class B land (0.22 per cent) and 1,299 ha of Eastern Darling Downs IAA land (0.19 per cent).[9]

Overall, the permanent disturbance footprint will traverse 0.07 per cent of the impact assessment area's productive agricultural land. This proportion can be used to estimate, at a high level, the potential loss of agricultural production resulting from the Project. In 2020-21, the gross value of agricultural production in Goondiwindi and Toowoomba LGAs was $1.62 billion.[10] Accordingly, it is estimated that the Project could result in a loss of $1.20 million (value foregone) in gross agricultural production per year.[11]

Land acquisition

Following initial public notification, the reference design for the Project has been revised to optimise the design and avoid direct impacts on intensive livestock operations, including feedlots, piggeries and poultry farms, where possible.

The permanent disturbance footprint for the Project traverses, in whole or part, 495 properties. During construction, the Project will temporarily occupy, in whole or in part, 48 properties. Based on the Queensland Collaborative Land Use and Management Program (QCLUMP), the predominant land use for the majority of the impacted properties includes (but is not limited to):

[8] The permanent disturbance footprint is defined as the physical rail corridor, including the rail tracks and associated infrastructure. It also includes other permanent works associated with the Project, such as where changes to the road network are required.

[9] EIS Chapter 8: Land Use and Tenure.

[10] Australian Bureau of Statistics, 2021, *Value of Agricultural Commodities Produced, Australia, 2020-21*.

[11] This value was estimated by calculating a proportion of the productive agricultural land impacted (productive land area disturbed within the Project footprint divided by total productive land in the Toowoomba and Goondiwindi LGAs) using the data contained in table titled *Percentage of land type within Toowoomba LGA traversed by the project footprint (outside of existing rail and road corridors)* in EIS Chapter 8: Land use and Tenure. The value of agricultural production in 2020-21 was multiplied by this proportion to understand the potential loss of agricultural value arising from the Project.

This value is an indicative estimate only - it does not consider the value of individual commodities produced per lot or the value-add activities which contribute to the gross value of agricultural production in the region. An assessment of the composition of agricultural production by lot and commodity may be undertaken following detailed design.

This value excluded land area which was already existing rail and road corridors.

- Production from relatively natural environments
- Production from dryland agriculture and plantation
- Conservation and natural environments
- Intensive uses
- Production from irrigated agriculture and plantations

There are also 56 easements that will be permanently acquired and 14 temporarily acquired, some of which are used for agriculture. Partial or full acquisition of these lots is expected to impact the land's ability to generate income.

While the permanent disturbance footprint reflects the land acquired to accommodate permanent infrastructure components of the Project (e.g. road, earthworks, rail maintenance access roads, drainage), properties acquired temporarily are affected during Project construction to support a range of construction related activities (e.g. laydown areas, non-resident workforce accommodation facilities, Whetstone Material Distribution Centre). Temporary disturbance to existing agricultural land will not result in a permanent loss of productive land. The temporarily acquired properties during construction will result in financial benefit from their use in accordance with the *Acquisition of Land Act 1967 (Queensland)* or subject to agreement with the landowner. Following construction, land used during construction will be rehabilitated in accordance with landowner agreement in the first instance and the *Rehabilitation and Landscaping Management Sub-plan* in addition to location- and property-specific reinstatement commitments.

The temporary Whetstone Material Distribution Centre (MDC) will be constructed on low-intensity agricultural land, approximately 18 km south-west of Inglewood and 59 km east of Goondiwindi in the Goondiwindi Regional Council local government area. These land parcels are used predominantly for agricultural purposes, including irrigated cropping and cattle grazing. The MDC site will be progressively decommissioned as there will be no need for the MDC facility following Project construction. As such, any potential impacts to land use and tenure will be temporary in nature. The temporarily leased land will be returned to the rural landowner and the current low-intensity agricultural uses of the land will resume. More details related to the construction and operation of the MDC can be found in Appendix AE: Whetstone MDC Preliminary Environmental Assessment.

The locations of the two temporary non-resident workforce accommodation facilities have been identified and included in the Project footprint. Based on data from the Queensland Land Use Mapping Program (QLUMP), these locations have been contained to rural land used for grazing, native vegetation and cropping purposes. The Yelarbon non-resident workforce accommodation facility will be located approximately 2.5 km northwest of Yelarbon, with access from the state-controlled Cunningham Highway. The Inglewood non-resident workforce accommodation facility will be located approximately 12 km northeast of Inglewood, with access from the state-controlled Millmerran–Inglewood Road. Following Project construction, opportunities for the beneficial re-use of the established workforce accommodation facilities will be investigated through consultation with local government and relevant stakeholders. If beneficial re-use of these facilities cannot be identified, the clean-up, landscape and rehabilitation of the impacted land related to the decommissioning activities will occur in accordance with ARTC policies and strategies outlined below.

- *Inland Rail Environment and Sustainability Policy* (refer to Appendix C: Corporate Policies)
- *Inland Rail Landscape and Rehabilitation Strategy*
- *Border to Gowrie Rehabilitation and Landscaping Sub-plan* (refer to the *Construction Environmental Management Plan* in EIS Chapter 24: Draft Outline Environmental Management Plan)

The Project's land requirements are detailed in the EIS Chapter 8: Land Use and Tenure and Appendix F: Impacted Properties. The extent of these impacts will be confirmed during detailed design.

Disruption to access and infrastructure

The Project utilises existing rail corridors for approximately 32 per cent of the length of the rail alignment. Where the Project does not utilise these corridors, it may result in impacts on agricultural land, including:

- **Water access and infrastructure**: The development of the Project may impede essential access to water, through impacts to drainage lines, diversions, and dams. The Project crosses a 12.5 km section of the Condamine River floodplain, which is heavily regulated in terms of water access, especially where the floodplain connects to the Murray-Darling Basin.

  Any disruption to water access has the potential to impact the viability of farming operations. Where disruption to water supply occurs, crossing points will be provided or the relocation of dams or irrigation systems will be undertaken in consultation with landowners to limit the impact of this disturbance. In addition, any disturbance to groundwater bores or irrigation infrastructure will be investigated and addressed in consultation with impacted landowners during detailed design.

  There are approximately 62 approved Soil Conservation Plans along the alignment, authorised under the *Soil Conservation Act 1986*. ARTC will work with property owners to amend these plans, implement any necessary works as required and have them approved by the Department of Resources to minimise impacts on landholder operations.

- **Transport access and infrastructure**: Disruptions to access during construction will be addressed through temporary diversions and onsite traffic management in consultation with the road managers, local community and landholders, where appropriate. Roads will only be closed permanently where the impact of diversions or consolidations is considered acceptable or where the existing location is not considered safe and cannot reasonably be made safe. In consultation with landowners, ARTC will ensure an appropriate level of access is maintained for agricultural businesses across and between properties affected by the Project. During construction, regular Project updates will be provided which forecast road works, road realignments and closures, and explain alternative routes to enable agricultural and other business operators to plan their travel with minimal disruptions.

  Further details are provided in the Social Impact Assessment (Appendix X) and EIS Chapter 20: Traffic, Transport and Access.

Acquisition of land used for livestock operations

The Project traverses a number of large feedlots and is in close proximity to poultry farms and piggeries. ARTC has worked with landowners to ensure there is minimal disruption to the ongoing operation of intensive animal husbandry.

ARTC will work with directly affected property owners to mitigate potential impacts on farm and business operations and develop cooperative strategies which will reduce impacts on productivity and connectivity. This includes the design of level crossings on private roads and in consultation with Goondiwindi Regional Council and the Department of Resources and temporary and permanent access for use of stock routes. ARTC will also implement property-specific measures to address potential impacts on land use, property, access, and water infrastructure.

Where acquisition is required, impacts such as severance of the land parcel and potential fragmentation of infrastructure and services may affect the operations of these businesses, resulting in loss of employment for farmworkers and reduced economic activity. The extent of these impacts will be confirmed during detailed design.

Disruption to stock and product movement

The Project footprint interfaces with formal stock routes at 12 locations and is likely to cross informal stock routes used to transfer stock to various grazing paddocks and holding yards. ARTC has worked with the Goondiwindi Regional Council and the Department of Resources to ensure the planning of the proposed Project alignment maintains the connectivity of stock routes.

Flood inundation

The Project crosses 19 major waterways (stream order ≥ 3) and 81 minor waterways (stream order < 3), with key waterways being the Condamine River (Main Branch and North Branch), Half Mile Gully, One Mile Gully and several Creek. Other major river and creek crossings include Macintyre River, Macintyre Brook, Pariagara Creek, Cattle Creek, Native Dog Creek, Bringalily Creek, Nicol Creek, Back Creek, Westbrook Creek and Dry Creek, Grasstree Creek, Condamine River and Gowrie Creek floodplains. These floodplains contain productive agricultural land, including irrigated land, in some places.

The Inland Rail feasibility design includes cross-drainage structures in the form of bridges and culverts to maintain existing surface water flow paths and flood flow distributions. The Project's design criteria objectives include avoidance of unacceptable increases in peak water levels, velocities, and time of submergence. The Project does not increase the existing extent (i.e. footprint) of flood inundation.

The Project may necessitate localised modification of land management practices, including the cropping regime, in response to confined afflux and time of inundation impacts. ARTC will work with landholders to develop suitable property-specific solutions based on land management practices.

Improvements in supply chain efficiency

Efficient supply chains support the regional and national capacity to enhance economic opportunities within local communities. The Project is a critical segment in the broader ARTC Inland Rail program, offering a more efficient solution for intrastate and interstate freight operators who will be able to avoid inland and coastal road and rail networks. Specifically, the Project:

- Offers opportunities to improve the productivity of local export industries (such as agriculture);
- Improves freight transportation infrastructure between the eastern and western sides of the Great Dividing Range; and
- Has the potential to unlock the construction of ancillary and complementary infrastructure, which will improve market access and expand local agricultural businesses and industry (see Transport Industry - Freight and Logistics below).

Tourism

Tourism is a significant industry for the regional economic catchment. The Darling Downs is recognised as a popular tourist destination for visitors seeking to explore rural landscapes and attractions. The Project has the potential to change local amenity and service capacity within the impact assessment area, during both construction (temporary) and operation (permanent).

During construction, there is potential for road works, the visual impact of laydown areas, and the accommodation of non-residential workers to affect tourists' experience and travel times. Tourism businesses located in and around the towns of Inglewood and Yelarbon are expected to be affected by the noise from the construction and operation of the Whetstone MDC. These impacts will be temporary whilst construction activities for the Project are undertaken in particular areas. Mitigation measures, including the implementation of noise barriers and time restrictions, have been considered to minimise these potential impacts. A detailed overview of noise and vibration assessments and corresponding mitigation measures can be found in EIS Chapter 16: Noise and Vibration.

As described in the Social Impact Assessment (Appendix X), the Project's Accommodation Management Plan requires the Contractor to consult with tourism associations and accommodation providers in potentially impacted communities (Goondiwindi, Yelarbon, Inglewood, Millmerran, Pittsworth and Brookstead) to identify interest and capacity to accommodate Project personnel. Any usage of short-term accommodation for the Project will be monitored and peak occupancy periods will be avoided in construction scheduling.

To mitigate potential impacts on local housing access and short-term accommodation, three temporary non-resident workforce accommodation sites have been proposed (located near Millmerran, Inglewood, and Yelarbon).

During operation, there is potential for reduced scenic amenity due to the Project's location within the rural and regional landscape. Some visitors will likely see the Project as diminishing rural character while others will find interest in the rail line structure. According to the Social Impact Assessment (Appendix X), this is not expected to have a significant impact on tourism visitation.

Local businesses

Construction materials

There are a number of construction businesses located within the impact assessment area, with a total of 1,334 employing businesses (86 in Goondiwindi and 1,248 in Toowoomba) and a further 1,559 non-employing businesses across the area.[15] These businesses are likely to be a significant source of services and equipment during the Project's construction.

The Project will require a range of construction supplies, including borrow material (spoil, gravel, or sand) and ballast material (crushed stone), pre-cast concrete, concrete sleepers, pre-built and panelled turnouts, steel, fencing, electrical components, fuel, and consumables.

The impact of the Project on local businesses is likely to vary depending on the businesses' location along the Project alignment. Due to their scale and experience, businesses in Toowoomba are more likely to have the capacity and capability to support the construction of the Project compared to rural businesses along the Project alignment. The Project would provide a boost to businesses in Toowoomba which experienced a slow-down following completion of the Toowoomba Bypass. Businesses across the Project impact assessment area can benefit from direct involvement in the Project's construction (including the rail corridor and non-resident workforce accommodation), as well as opportunities in secondary service and supply industries (such as retail, hospitality, and other support services).

Where required, small businesses will likely need to develop their current capacity to ensure that they can competitively participate in the Project's supply chain. ARTC acknowledges that small businesses need time to upskill and prepare to tender for major projects and has started preparing local businesses to tender for the Project and other major projects in the region.

ARTC has confirmed that pre-cast concrete can be sourced within the Project region, ballast material may be sourced from local quarries and borrow pits, and other components such as rehabilitation supplies and fencing can also be sourced within the impact assessment area. Inland Rail will source sleepers from Austrak, a Rockhampton manufacturer. Sleepers may also come from their Wagga facility, thereby increasing the current duration of their existing plant life.

ARTC has also developed the Inland Rail Sustainable Procurement Policy which will ensure that local, regional, and Indigenous businesses will have opportunities to supply the Project.

Transportation

During construction, the Project may provide opportunities for transport or logistics businesses in Goondiwindi and Toowoomba to transport materials to laydown areas and remove waste materials and recyclables from construction compounds and non-resident workforce accommodation facilities. Other opportunities include transporting a full spectrum of rail construction materials to the MDC. Following construction, these opportunities for transport or logistics businesses have the potential to expand over the long term, particularly if a regional rail distribution point, rail-based warehousing or associated freight precincts are established on the Project alignment.

During operation, the anticipated mode shift from road freight to rail freight is likely to reduce the number of heavy vehicles travelling on the road network, with the potential to impact levels of trade for local transportation businesses. These impacts may be partially offset by the aforementioned opportunities to increase investment and activity in freight/logistics operations adjacent to Inland Rail.

[15] ABS, Counts of Australian Businesses, including Entries and Exits, July 2018 – June 2022, cat. no. 8165.0.

Freight and logistics

As part of Inland Rail, the Project has the potential to stimulate business and industry development at the Toowoomba Enterprise Hub in Wellcamp. By providing efficient transport access to intrastate and interstate markets, the Project has the potential to act as a catalyst for further private-sector investment in this area, particularly for freight and logistics operations. The further development of the Toowoomba Enterprise Hub has the potential to unlock greater economic activity in the region, such as by promoting greater international export opportunities via Wellcamp Airport.

Secondary service and supply businesses

The Project is likely to offer opportunities in secondary service and supply industries (such as retail, hospitality, and other support services) for businesses in close proximity to the construction footprint and non-resident workforce accommodation facilities. The expansion in construction activity has the potential to support additional temporary flow-on demand and additional spending by the construction workforce in the local community, which is likely to lead to increased trading levels for small businesses, such as food and beverage businesses in the impact assessment area.

Retail businesses in Millmerran, Inglewood and Goondiwindi have the potential to benefit from opportunities to supply materials and services to the Project's non-resident workforce accommodation facilities. Some local retail businesses may also benefit from increased trade from workers residing in these accommodation areas. The construction of the Whetstone MDC will provide opportunities for retail businesses in nearby towns, such as Yelarbon and Inglewood, to experience a positive impact from increased trade derived from the MDC workforce. The nearby towns, to the Whetstone MDC and non-residential workforce accommodation facilities, may experience temporary increases in population that could impact road safety or result in more non-local personnel in the area. An increase in the demand for construction labour may also contribute to shortages in specific trades and labour for some local service and supply businesses. More information related to labour demand, and business and industry impacts can be found in Appendix AE: Whetstone Material Distribution Centre Preliminary Environmental Assessment.

As identified in the Social Impact Assessment (Appendix X), some small businesses will likely need to scale up their current capacity to participate in the Project, particularly for businesses in rural areas along the alignment. Importantly, businesses need to understand the temporary nature of the construction stage and adjust capacity accordingly.

Following Project approval, ARTC and Contractors will identify potential cooperation or partnerships for the development of employment and business capacity in the impact assessment area (see Social Impact Assessment Appendix X).

Telecommunications

Inland Rail is planning telecommunications systems as part of construction requirements and ongoing safe rail operations. ARTC is working with telecommunications carrier network operators to provide services for construction site offices, non-resident workforce accommodation facilities and the railway corridor. While the focus will be on the provision of voice and high-speed data services in the vicinity of the rail corridor, there is the potential for telecommunications capacity and digital connectivity to be improved for landowners and residents close to the Project alignment.

Noise and amenity

There is potential for noise to impact the amenity of businesses in the towns of Yelarbon, Brookstead, and Pittsworth, particularly retail and hospitality businesses, during the construction and operation of the Project.

During construction, short-term accommodation businesses are likely to experience some negative impacts due to increased noise and temporary access disruptions which may result in loss of income. ARTC will consult with businesses within towns where construction noise or traffic disruptions could affect their amenity and consider their feedback in finalising plans for works near their businesses.

During construction, impacts will be managed through the implementation of the imposed conditions to the Project's EIS approval and ARTC's operational management standards. Additionally, the Project includes an investigation of concept noise barriers in Yelarbon, Pittsworth and Brookstead to mitigate predicted exceedances of operational rail noise criteria. Outside of these key townships, measures to suitably reduce railway noise impacts are expected to be limited to property controls, such as architectural property treatments and upgrades to property fencing.

Land resumptions

The land acquisition process is to be undertaken by the Department of Transport and Main Roads (TMR) as the Acquiring Authority. Based on ARTC's consultation with landowners, most of the landowners impacted by the Project are expected to be able to adjust operations and continue to operate their businesses. Consultation to date indicates that business operations (non-agricultural) where acquisition would result in the closure or relocation of the business or retirement of the business owner include:

- Two transport businesses: one near Pittsworth and a second near Southbrook;
- Three grazing operations;
- One cropping farm; and
- One welding business in Umbiram.

Based on ARTC's consultation with landowners, ARTC does not currently anticipate land acquisition that would result in the closure or relocation of any businesses in the Goondiwindi LGA.

Additional information related to land acquisition and requirements for the Project is detailed in EIS Chapter 17: Social and Appendix F: Impacted Properties. The extent of these impacts will be confirmed during detailed design with compensation to be provided in accordance with the *Acquisition of Land Act 1967* (Queensland).

Inland Rail Program impacts

In accordance with the requirements of the ToR, this EIA has focussed on the specific economic impacts resulting from the construction and operation of the Project. However, the EIA acknowledges the role of the Project, and the remaining Project sections, in collectively delivering the benefits of Inland Rail. In its entirety, Inland Rail will enhance Australia's existing national rail network and serve the interstate freight market. As per the *Inland Rail Programme Business Case (2015)*, key economic impacts of Inland Rail include:

- Lower prices for consumers as a result of lower inter-capital freight transport costs, which reduces the cost of living for households.
- Positive direct net economic benefits, driven by improvements in freight productivity, reliability and availability, and benefits to the community from reduced environmental externalities, reduced road congestion and improved safety benefits. The Inland Rail Program is stated to be economically viable with a benefit-cost ratio of 1.02 at a 7 per cent discount rate (2.62 at a 4 per cent discount rate).
- Economic growth as increased profits (for industries and producers where intercapital freight is an input or output) and incomes are multiplied through the economy. The Inland Rail Program is anticipated to deliver a net positive impact of $16 billion on gross domestic product ($2015) over its 10-year construction period and 50 years of operation.
- Nationally, Inland Rail is also expected to deliver an additional 16,000 jobs at the peak of construction, and an average of 700 additional jobs per annum during operation.
- Enhanced competition between rail and road freight, by providing a credible transport alternative, which will drive further innovation and efficiency.
- Potential to promote the expansion and development of freight precincts around Inland Rail terminals as a result of the benefits from co-location and clustering of industries (as a result of reduced transport costs to warehousing, economies of scale and knowledge-sharing opportunities).

Economic benefits assessment

An economic benefits assessment has been undertaken to identify and assess the likely benefits of the Project, as a discrete project, to the community. These economic benefits have been estimated based on the impacts of the Project on the transport network, in particular freight operators, along with the benefits accrued by non-users (the community). Where the Project improves the transport connectivity and efficiency between freight originators and destinations, these movements across road and rail have been assessed in the appraisal. Economic benefits associated with increased efficiency in the construction and delivery of the Project, such as establishing the MDC in Whetstone to support Project construction, are not captured in this analysis.

Accordingly, for the purposes of this EIA, there are two components to the CBA:

1. Evaluation of the likely benefits of the discrete Project (economic benefits assessment). This analysis assesses only those impacts that would be likely if freight operators were to respond to the completion of the individual Project (in isolation of the entire Inland Rail). A project-specific CBA has not been undertaken, as the findings will not capture the full economic impact that is expected to be delivered upon completion of Inland Rail.
2. Description of the economic performance measures calculated for Inland Rail as a whole (in accordance with the *Inland Rail Programme Business Case (2015)*).

Economic benefits assessment results

The economic benefits assessment estimates that the Project is expected to provide a total of $703.26 million ($2022 present value terms) in incremental benefits to the impact assessment area (at a 7 per cent discount rate). This consists of $539.91 million in freight benefits and $163.35 million in community benefits.

Observing the composition of benefits, the largest share of benefits for the Project is freight operating cost savings, representing approximately 46 per cent of the total benefits (at a 7 per cent discount rate). Freight benefits more broadly (including freight time travel savings, operating cost savings, as well as improved reliability and availability) represent approximately 77 per cent of the total projected benefits for the Project.

Reductions in environmental externalities (i.e. air pollution and greenhouse gas emissions) from reduced heavy vehicle km travelled represents approximately 9 per cent of the total benefits (at the 7 per cent discount rate).

The full results of the economic benefits assessment are presented in the Table 1 below.

Table 1-1: Results of the economic benefits assessment, present value terms ($2022)

Benefits	Discount Rate		
	4%	7%	10%
Freight Benefits	**$1,081.25 m**	**$539.91 m**	**$311.35 m**
Travel Time Savings	*$66.02 m*	*$33.96 m*	*$19.98 m*
Operating Cost Savings	*$606.86 m*	*$320.07 m*	*$192.98 m*
Improved Availability	*$320.31 m*	*$144.86 m*	*$76.09 m*
Improved Reliability	*$88.06 m*	*$41.03 m*	*$22.30 m*
Community Benefits	**$309.52 m**	**$163.35 m**	**$98.42 m**
Crash Reduction	*$42.25 m*	*$22.32 m*	*$13.47 m*
Environmental Externalities	*$124.37 m*	*$65.53 m*	*$39.39 m*
Road Decongestion Benefits	*$142.90 m*	*$75.49 m*	*$45.56 m*
TOTAL BENEFITS	**$1,390.77 m**	**$703.26 m**	**$409.77 m**

Source: KPMG

Cost Benefit Analysis: Inland Rail Programme Business Case

As detailed above, due to the nature of the incremental assessment approach adopted for this EIA, a project-specific CBA to assess the costs and benefits of the Project in isolation has not been undertaken. Findings from conducting a project-specific CBA will not capture the full economic impact that is expected to be delivered upon completion of Inland Rail. Inland Rail is anticipated to deliver benefits above the sum of the individual benefits of each individual segment.

The results of the economic analysis undertaken for the full Inland Rail Program, as presented in the *Inland Rail Programme Business Case (2015)*, are provided in Table 2 below. As shown, the construction and operation of Inland Rail is estimated to deliver positive net economic benefits with a cost-benefit ratio above one.

Table 1-2: Economic appraisal results for Inland Rail ($2015)

	Net Present Value	Benefit Cost Ratio
PV at a 4% Discount Rate	$13,928 m	2.62
PV at a 7% Discount Rate	$116.1 m	1.02

Source: Inland Rail Programme Business Case 2015
Note: Assumes complementary investment on the Queensland Rail network (Western Line and Brisbane metropolitan network).

Regional impact analysis

A regional impact analysis has been undertaken to highlight the economic impacts of the Project on the regional, State, and national economies using an equilibrium modelling framework. The regional economy is represented by the Darling Downs – Maranoa labour market region.

A CGE model (KPMG-SD) was developed to examine the direct and indirect (flow-on) effects arising from the construction of the Project on the broader economy. The modelling framework assesses the direct and indirect effects of significant net government expenditure on traditional measures of regional economic performance, such as Gross Regional product (GRP), Gross State Product (GSP) and Gross Domestic Product (GDP). KPMG-SD also provides estimates of employment supported through these investments, noting that estimates of employment produced by the model reflect the direct and indirect jobs generated across the economy. [16]

The key impacts of the Project on the Darling Downs – Maranoa region during the Construction Works stage are summarised in Table 3 below.

Table 1-3: Summary of direct and indirect economic impacts of the Project on the regional economic catchment, construction stage

	Additional Real Gross Regional Product ($2021-22)	Additional Direct and Indirect Jobs (Persons, annual average)
Darling Downs – Maranoa	$410 m	332
Rest of Queensland	$143 m	107
Rest of Australia	$26 m	-93

Source: KPMG

During the Construction Works stage, real GRP is projected to be $410 million higher than the baseline level for the Darling Downs – Maranoa region, $143 million for the remainder of Queensland, and $26 million for the remainder of Australia. It is estimated that, over the Construction Works stage, an additional 332 direct and indirect jobs will be generated on average each year for Darling Downs – Maranoa and 107 jobs for the rest of

[16] As compared to the direct jobs determined through the indicative construction schedule and component activities as described in the workforce profile.

Queensland.[17] The displacement of some economic activity in other Australian states is expected to result in total employment being lower than in the baseline by 93 jobs. The simulation results indicate that the economic impacts of the Project during the Construction Works stage are concentrated in the Darling Downs – Maranoa region. Net exports, which include inter-regional and international exports and imports, are negatively impacted. The resources required to complete the construction of the Project are expected to be sourced locally and from interstate and overseas suppliers. At the local level, higher costs induce the cost-sensitive, trade-exposed sectors to release resources to accommodate the investment demands of the Project.[18]

The *Construction* sector, which benefits directly from the Project's CAPEX costs is anticipated to expand employment the most. The results also indicate the expansion of employment in the *Professional, Scientific and Technical Services* and *Wholesale Trade* sectors. This reflects the importance of these two sectors in the *Construction sector's* supply chain. The increase in demand for resources to complete the construction of the Project tends to increase resource costs. This has negative impacts on traditional cost-sensitive, trade-exposed sectors, such as *Agriculture, Forestry and Fishing*, *Mining*, and *Manufacturing,* and on non-traditional trade-exposed sectors, such as *Accommodation and Food Services* and *Education and Training*. As a result, these sectors contract and release resources to construction-related sectors.

KPMG's central forecasts outline that economic growth will peak towards the end of 2022 and then ease back to a more moderate pace over the next few years. The unemployment rate is expected to increase gradually over the next few years but remains at levels that are modest by historical standards. The key risk to KPMG's central case forecasts is that inflation, which is assumed to peak at around 7 per cent towards the end of 2022, is higher than expected, in part due to labour market tightness. If this risk was to materialise, the Reserve Bank would need to raise interest rates more aggressively in a bid to bring inflation back within its target range. This policy response would slow the economy more sharply than KPMG's central forecast and increase the chance of the economy falling into recession. Therefore, while the risks of labour shortages are high under KPMG's central case, labour market conditions could deteriorate rapidly over the next year if inflation in Australia and overseas necessitates Central Banks to aggressively increase interest rates.

Cumulative economic impacts

The cumulative EIA refers to the potential impact of cumulative stimulus on the economy resulting from a set of existing or planned projects within or adjacent to the impact assessment area. Cumulative impacts may result from the spatial and/or temporal interaction between these projects.

For the purposes of this report, the cumulative EIA has two components:

- **Inland Rail Program in Queensland**

  A quantitative assessment of the cumulative macroeconomic impact of Inland Rail on the economy, resulting from the construction of adjacent sections of Inland Rail.

  Five sections of Inland Rail fall in Queensland, including Border to Gowrie , Gowrie to Helidon, Helidon to Calvert, Calvert to Kagaru and Kagaru to Acacia Ridge and Bromelton. In addition, the assessment also includes the CAPEX costs of two Inland Rail sections in New South Wales that have an overlapping timeline with the construction of the Project – Narrabri to North Star and North Star to Border. However, the potential

[17] To put this in context, the planned direct workforce requirement of the Project during the Construction Works stage is for an average of approximately 323 persons (including management allowance) per year.

[18] The CAPEX costs associated with the Project constitute a temporary expenditure shock to the economy and do not include the CAPEX for constructing the Whetstone Material Distribution Centre (MDC). Some of the goods and services purchased by customers in the Darling Downs – Maranoa region are imported from interstate and overseas. CAPEX costs, particularly at the regional level, are more import-intensive than other types of expenditure. This means that a CAPEX cost shock will, other things being equal, result in net exports contracting. In addition, KPMG has assumed that businesses do not respond to the temporary shock by increasing their productive capacity through investment in fixed capital. Instead, businesses use more labour with their existing fixed assets (e.g. plant and equipment), which increases costs and reduces competitiveness. Where it is profitable to do so, businesses switch some of their productive capacity towards accommodating the demands associated with the Project and away from sales to other customers (e.g. to interstate and overseas customers). The macroeconomic results reported are roughly linear for small deviations in the assumed CAPEX costs. For example, if the Project's CAPEX costs were increased by 5 per cent, then net exports for Darling Downs – Maranoa would fall by a further 5 per cent.

impacts associated with establishing the MDC to support the construction and delivery of the adjacent sections of the Inland Rail Program are not captured in the cumulative EIA.[19]

- **Broader cumulative assessment**

  A qualitative assessment of the cumulative impact of state significant projects (that have been identified by ARTC as having a relationship to the Project - refer to Appendix A in this document) on local and regional labour markets, the supply chain and local businesses.

Inland Rail Program in Queensland

The construction stages of the Queensland and two New South Wales sections (Narrabri to North Star and North Star to Border) of the Inland Rail Program have been jointly simulated to analyse the cumulative economic impacts of these projects. Hereafter, these sections will be referred to as the northern sections. The incremental economic impacts of the northern sections include an increase in real GDP of $1.5 billion (measured in 2022 dollars) and an increase in the average number of jobs over the period FY2023 to FY2030 of 548 jobs per year.

The Project is the only segment of Inland Rail that is located within the Darling Downs – Maranoa region. Construction activities related to this segment will directly impact the Darling Downs – Maranoa economy. The remaining sections of the Inland Rail Program, which this EIA is a part of, will impact the Darling Downs – Maranoa economy indirectly.

The regional impact analysis discussed in the previous section was based on simulations when the Project segment was modelled in isolation. In that context, the direct and indirect incremental change to jobs in the Darling Downs – Maranoa economy was estimated to be 332 jobs per year. When all the northern sections are considered jointly, the incremental change to jobs (direct and indirect) in Darling Downs – Maranoa decreases marginally to 326 jobs per year during the Project's construction stage (FY2024 to FY2028). The incremental change to jobs in Darling Downs – Maranoa peaks in 2026 at 559 jobs.

Broader cumulative assessment

The concurrent construction of interacting projects has the potential to increase the demand for labour in the local and regional economies, particularly for workers with trade and construction skills/knowledge. The demand for construction workers within a similar timeframe will lead to cumulative demands on construction labour, not only within the local and regional economy, but also across Queensland, New South Wales, and potentially nationally.

The results of the regional EIA indicate that there is a deterioration in the Darling Downs – Maranoa labour market, and the Project schedule may also be optimised to minimise market impact. It is reasonable to assume that the regional labour market will have some capacity to supply a portion of the workforce requirements of the Project. However, these conditions may change in the context of cumulative labour market demand. Major infrastructure projects in the adjacent and surrounding areas, including those associated with Inland Rail, have the potential to put some pressure on labour markets if inopportune scheduling results in cumulative and competing demand for trades and construction labour. However, the overall labour demands of the various infrastructure projects expected to be constructed were modest and that scheduling could be optimised to minimise market impact. The best estimates of prevailing trends in the Darling Downs – Maranoa labour market, and the ability of construction workers to mobilise to Project locations, suggest that the risks of labour market disruption can be reduced.

There may be benefits from having additional infrastructure projects in the adjacent and surrounding areas around the same time as the Project. These benefits come in the form of lowered mobilisation costs and the ability to transfer labour experience and skills between projects, particularly those constructed in the period leading up to, and the period following the Project's construction stage.

[19] The $36.5 CAPEX for constructing the Whetstone MDC represents 1.6 per cent of the total $2.2 billion CAPEX for the Project. As the economic modelling was done at a point in time prior to the inclusion of the Whetstone MDC in the EIS process, and the need for consistency in estimating the cumulative impacts across the Queensland , the additional $36.5 million CAPEX has been excluded from the modelling analysis. The minor update to CAPEX will not materially impact the results.

Legacy impacts

There is the potential for the Project to provide long-term legacy benefits to local communities from Project investments that remain after the Project is constructed and operational. The legacy impacts have been identified through local consultation undertaken by ARTC and include:

- Development and enhancement of local skills and business capacity;
- Improved road safety;
- Wider regional economic development opportunities;
- Community projects; and
- Digital connectivity.

Mitigation and management strategies

The Project will result in a number of economic impacts, with potential economic benefits realised at a local and regional level. To maximise the positive outcomes of the Project, a number of strategies to avoid, reduce or mitigate the negative economic impacts, and enhance and facilitate the capture of positive impacts, have been proposed by ARTC.

A draft SIMP has been developed which outlines how the Project will engage with communities and stakeholders, mitigate social impacts, enhance Project benefits for the impact assessment area and Project region, and monitor and report on the delivery and effectiveness of management measures. Two sub-plans are directly relevant to the economic impacts identified and assessed in this EIA – Workforce Management and Local Business and Industry Participation.

There are a number of economic impacts identified within this EIA which are not addressed within the draft SIMP. Where these impacts cannot be avoided, a range of measures has been proposed by ARTC to carefully manage and mitigate these impacts. For example, measures include working with individual landowners to develop suitable solutions based on individual farm management practices, rehabilitating land as close as possible to pre-construction conditions, and consulting with tourism associations to ensure generalised impacts on tourism values are reduced, wherever possible.

Conclusions

Local and regional employment, business, and industry impacts

At a local level, the Project will support regional economic development through opportunities for local and regional employment, businesses, and industries, such as:

- The Project offers opportunities to encourage, develop and grow Indigenous, local, and regional businesses through the supply of resources and materials for the construction and operation of the Project (e.g. borrow and ballast materials, fencing, electrical installation (excluding rail systems) and instrumentation, rehabilitation and landscaping, cleaning and maintenance of construction and accommodation facilities);
- The Project offers opportunities in secondary service and supply industries (such as retail, hospitality, and other support services) for businesses in close proximity to the construction footprint (including opportunities to supply to the three proposed non-resident workforce accommodation facilities in the vicinity of Turallin / Millmerran, Inglewood and Yelarbon). The expansion in construction activity is also likely to support additional temporary flow-on demand and additional spending by the construction workforce in the local community; and
- As part of Inland Rail, the Project has the potential to stimulate business and industry development at the Toowoomba Enterprise Hub in Wellcamp. By providing efficient transport access to intrastate and interstate markets, the Project has the potential to act as a catalyst for further private-sector investment in this area, particularly for freight and logistics operations. The further development of the Toowoomba Enterprise Hub

has the potential to unlock greater economic activity in the region, such as by promoting greater international export opportunities via Wellcamp Airport.

The Project alignment has been designed to minimise impacts on local business and industry, however, the Project may result in the disruption of the agriculture and tourism industries through:

- The loss of agricultural land (through disturbance, acquisition, or sterilisation by the permanent disturbance footprint), disruption to farm management, or changes in accessibility or connectivity to the market. This may negatively impact the productive capacity and total economic value added by the local agricultural industry. Based on the proportion of productive agricultural land lost, it is estimated that the Project could result in a loss of $1.20 million (value foregone) in gross agricultural production per year.[20] ARTC will work with individual landowners to develop suitable management solutions based on individual farm management practices to mitigate and manage these impacts.
- In consultation with landowners, ARTC will ensure an appropriate level of access is maintained for agricultural businesses across and between properties affected by the Project. During Construction Works, Project updates will be provided which forecast road works, road realignments and closures, and explain alternative routes to enable agricultural and other business operators to plan their travel with minimal disruptions. Impacts, such as severance or loss of land which may have the potential to impact the operations of agricultural businesses, will be considered by the Constructing Authority in the terms of the acquisition agreements.
- Changes to the amenity of, or connectivity to, the local landscape and attractions. The EIS Chapter 10: Landscape and Visual Impact Assessment concludes that a significant decrease in visitation as a result of this impact is unlikely. ARTC will work with chambers of commerce, tourist information centres and the Goondiwindi and Toowoomba Regional Councils to ensure potential impacts on tourist visitation are mitigated through support for marketing campaigns targeting potentially impacted communities.

Economic benefits assessment

The economic benefits assessment estimates that the Project is expected to provide a total of $703.26 million ($2022 present value terms) in incremental benefits (at a 7 per cent discount rate) to society. These benefits result from improvements in freight productivity, reliability and availability, and benefits to the community from crash reductions reduced environmental externalities and road decongestion benefits.

Regional impact analysis

The Project will promote regional economic growth across the Darling Downs – Maranoa region. To the extent they can be relied upon, recent statistics suggest that there is a deterioration in Darling Downs – Maranoa labour market, which provides opportunities for recruiting, training, and re-skilling available workforces in the region to supply a significant portion of the workforce requirements of the Project.

Over the Construction Works stage, real GRP is projected to be $410 million higher than the baseline level for Darling Downs – Maranoa.

The Project is also expected to deliver an additional 332 jobs (direct and indirect) per year over the Construction Works period.

[20] This value was estimated by calculating a proportion of the productive agricultural land impacted (productive land area disturbed within the Project footprint divided by total productive land in the Toowoomba and Goondiwindi LGAs) using the data contained in *Table 8.35: Percentage of land type within Toowoomba LGA traversed by the project footprint (outside of existing rail and road corridors)* in EIS Chapter 8: Land use and Tenure. The value of agricultural production in 2021-21 was multiplied by this proportion to understand the potential loss of agricultural value arising from the Project.

This value is an indicative estimate only - it does not consider the value of individual commodities produced per lot or the value-add activities which contribute to the gross value of agricultural production in the region. An assessment of the composition of agricultural production by lot and commodity may be undertaken following detailed design.

This value excluded land area that was already existing rail and road corridors.

It is important to consider labour market conditions in the broader State and national context. If labour market conditions at the national and State levels remain in the recent range then the Project's Construction Works stage will be completed in the context of a relatively tight labour market, especially in the market for skilled labour relevant to the construction sector. Moreover, if inflation in Australia and overseas necessitates central banks to aggressively increase interest rates, labour market conditions could deteriorate rapidly. The best estimates of prevailing trends in the Darling Downs – Maranoa labour market, and the ability of construction workers to mobilise to project locations, suggest that the risks of labour market disruption can be reduced.

Cumulative regional impact analysis

The incremental economic impacts of the northern sections of Inland Rail (Queensland sections and two New South Wales sections – Narrabri to North Star an North Star to Border) include an increase in real GDP of $1.5 billion (measured in 2022 dollars) and an increase in the average number of jobs over the period FY2023 to FY2030 of 548 jobs per year.

The regional impact analysis was based on simulations when the Project segment was modelled in isolation. In that context, the direct and indirect increment to jobs in the Darling Downs – Maranoa economy was estimated to be 332 jobs per year. When all the northern sections are considered jointly, the increment in jobs (direct and indirect) in Darling Downs – Maranoa decreases marginally to 326 jobs per year during the Project's Construction Works stage (FY2024 to FY2028). The increment to jobs in Darling Downs – Maranoa peaks in 2026 at 559 jobs.

The expansion in construction activity and regional employment is also likely to increase demand for a range of local infrastructure and services, including in the construction supply chain and for local retail and hospitality businesses.

Impact management

ARTC is committed to enhancing the economic benefits of the Project while avoiding, mitigating or managing any adverse economic impacts. Accordingly, ARTC will undertake and/or require its Contractor to undertake to manage the social and socio-economic impacts of the Project and enhance proposal benefits and opportunities.

1 Introduction

The following economic impact assessment (EIA) report has been prepared to identify potential economic impacts of the proposed Inland Rail - Border to Gowrie Project (the Project) which forms part of the Inland Rail Program (Inland Rail). Inland Rail is a direct interstate freight rail corridor, approximately 1,700 kilometres (km), between Melbourne and Brisbane via central-west New South Wales and Toowoomba, Queensland.

While the following EIA is focused on the specific impacts resulting from the Project, the assessment acknowledges the role of the Project, and the remaining Project sections, in collectively delivering the benefits of Inland Rail. In its entirety, Inland Rail will enhance Australia's existing national rail network and serve the interstate freight market. The primary economic objective of Inland Rail is to promote economic growth by improving the efficiency of transport for Australia's exports, and increasing the productivity of domestic supply chains.

Australian Rail Track Corporation Ltd (ARTC) lodged the draft Environmental Impact Statement (EIS) with the Coordinator-General in 2021. Since that time, the reference design for the Project has been revised to optimise the design.

The options analysis for the rail alignment was an integral part of the overall development of the revised reference design for the Project. The analysis was an iterative process that involved option selection, engineering and design development, and evaluation to define the reference design for the revised draft EIS. ARTC has revised the technical engineering, environmental and social assessments to reflect the revised reference design.

During the development of the reference design and draft EIS, ARTC has undertaken engagement with both the Commonwealth and the Queensland Government, local governments, road managers, local community groups and landowners. This consultation has enabled ARTC to optimise the design for the horizontal and vertical rail alignments and the road and rail interfaces along the Project alignment. The revised design still meets the l requirements for the *Inland Rail Programme Business Case (2015)* and minimises the potential impacts on the community and receiving environment.

1.1 Legislation

The purpose of this EIA is to form part of an EIS being prepared by ARTC to address the Terms of Reference (ToR) issued by the Queensland Coordinator-General under the *State Development and Public Works Organisation Act 1971* (*SDPWO Act*) and for the purposes of the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) (*EPBC Act*). On 9 April 2018, the Commonwealth Minister for the Environment and Energy determined that the Project is a 'controlled action' under the *EPBC Act*. Following the initial public notification period for the draft EIS, this EIA also addresses additional RFI requirements from the Coordinator-General. The ToR information requirements can be seen in Table 4 and Table 5 below.

Table 1-1: EIS EIA Information Requirements

Section 11.141: EIS Economic Objectives	
The construction and operation of the Project should aim to: (a) avoid or mitigate adverse economic impacts arising from the Project (b) capitalise on opportunities potentially available for capable local industries and communities (c) create a net economic benefit to the region and State.	
Information Requirements	**EIA Section**
Identify the economic impacts of the Project on the local and regional area and the State.	Sections 5.2 to 5.7

Section 11.141: EIS Economic Objectives	
Estimate the costs and benefits and economic impacts of the proposal using both regional impact analysis and cost-benefit analysis. The analysis should be consistent with the Coordinator-General's *Economic impact assessment guideline (April 2017).*	Sections 5.3 and 5.4

Table 1-2: Other relevant ToR Information Requirements

Information Requirements	EIA Section
Section 5.1 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. The EIS should demonstrate that the Project is based on sound environmental principles and practices.	Sections 5 and 6 (These requirements are addressed through the remainder of the EIS.)

1.2 Guidelines

As identified in the ToR, the EIA has been undertaken in accordance with the guidance provided by the Coordinator-General's *Economic Impact Assessment Guideline (April 2017).*

The guideline states that the

"EIA must estimate the Project's economic impacts and identify measures to manage any negative impacts and capture the economic opportunities generated by the Project. It must:

- *include both a description of the economic environment with and without the Project;*
- *use standardised methodologies and information;*
- *make all assumptions transparent; and*
- *propose targeted impact management measures.*

The EIA must meet the requirements of the ToR and be consistent with the social impact assessment and other elements of the EIS. The EIA must be developed in consultation with key stakeholders such as local governments, industry bodies and local businesses."

1.3 Policy and planning

Across Federal, State and Local Governments, there are a number of strategic policy and planning documents relevant to the Project, including regional infrastructure and economic development planning.

Australian Infrastructure Plan 2021, Infrastructure Australia

The Australian Infrastructure Plan was developed by Infrastructure Australia as a long-term plan and roadmap for infrastructure reform and investment in Australia. The *Australian Infrastructure Plan* is guided by four key themes:

- Adapting to change and uncertainty;
- Harnessing transformative technology and digitalisation;
- Delivering public value; and

- Embracing a diverse geography.

The *Australian Infrastructure Plan* recognises the challenges COVID-19 has uncovered regarding the movement of freight. These include the importance of connecting regional and remote Australia and getting the most out of transport investment. The key to addressing these challenges will be increasing the availability and use of freight rail, including optimising access to Inland Rail.

The *Australian Infrastructure Plan* makes a number of key recommendations regarding freight, including the need to improve the liveability and economic sustainability of regional, rural, and remote areas by developing, maintaining, and operating integrated freight and passenger transport networks that meet end-to-end access needs. As both a greenfield and enhancement (brownfield) project, the Project will contribute to the realisation of these benefits, including through improvements to the productivity and competitiveness of Australia's freight sector.

The National Freight and Supply Chain Strategy 2019, Transport and Infrastructure Council

The National Freight and Supply Chain Strategy (August 2019) (NFSCS) was developed by the Transport and Infrastructure Council to provide the strategic direction to facilitate growth in Australia's freight task and to maintain and increase Australian competitiveness through productivity and efficiency enhancements (through transport).

The *NFSCS* commits to national action in four critical areas, two of which are directly relevant to the construction and operation of the Project:

- Smarter and targeted infrastructure – infrastructure supports growing freight needs, ensuring freight is moved most efficiently and effectively; and
- Enable improved supply chain efficiency – freight needs are serviced by efficient and competitive supply chains underpinned by collaboration and accessible data.

Inland Rail, as a complete program supported by the Project, delivers on these critical areas of the *NFSCS* by providing additional capacity within the transport system to support growing freight demand. Inland Rail also offers opportunities to support the efficiency of local export industries by driving savings in freight costs (by increasing the competition between road and rail freight modes).

State Infrastructure Strategy (2022-2041)

The *2022 State Infrastructure Strategy (SIS)* was released on 9 June 2022 with a vision to *"drive collaborative state infrastructure planning to boost productivity, grow our economy and create jobs throughout the state. Infrastructure planning and delivery will leverage opportunities to improve the liveability of our communities and capitalise on innovation to build a strong, sustainable, and resilient Queensland."*

The *SIS* has four guiding objectives that have helped shape the 183 priorities. The objectives aim to:

- Encourage jobs, growth, and productivity - Investing in productive infrastructure to drive industry diversification and deliver a sustainable infrastructure pipeline.
- Enhance sustainability and resilience - Reducing our environmental impact and improving infrastructure resilience and adaptation through better design and management of both built and natural assets.
- Develop regions, places, and precincts - Creating thriving, resilient and liveable communities through place-based infrastructure planning and delivery.
- Adopt smarter approaches – by focusing on innovation and using data and technology to improve productivity through infrastructure delivery, operation, and maintenance, including 'digital by default'.[21]

[21] Department of State Development, Infrastructure, Local Government and Planning. State Infrastructure Strategy 2022. https://www.statedevelopment.qld.gov.au/industry/infrastructure/state-infrastructure-strategy

Identified as a key priority action, the *SIS* highlights the importance of continuing to work with the Australian Government to maximise the benefits of Inland Rail in Queensland. The Project will support the delivery of the *SIS* by enhancing connections with producers and markets and creating new opportunities to deliver freight between Melbourne and Brisbane, and beyond to global markets.

Queensland Freight Strategy 2019, Queensland Government

The *Queensland Freight Strategy – Advancing Freight in Queensland* sets a shared vision for the State's freight system through a series of commitments that have the aim of guiding policy, planning, and investment decision-making over the next 10 years. The vision for Queensland is "an integrated, resilient and safe freight system that supports the economy and community".

The *Queensland Freight Strategy – Advancing Freight in Queensland* commits to optimising existing freight infrastructure and targeting investment toward creating economic opportunities. The *Queensland Freight Strategy – Advancing Freight in Queensland* also acknowledges the importance of smarter connectivity and access, identifying the role of competitive rail freight services in promoting the mode shift for freight from road to rail. The development of the Project supports the strategic intent and direction of the *Queensland Freight Strategy – Advancing Freight in Queensland* by ensuring connectivity to existing operating lines (such as the South Western Line and the Millmerran Branch Line) to improve the efficiency of rail freight. The Project is projected to improve the productivity of regional and State supply-chains and industries.

Draft South-East Queensland Regional Plan 2023 Update (ShapingSEQ), Queensland Government

Shaping SEQ (South-East Queensland Regional Plan) is the Queensland Government's plan to guide the future development of the SEQ region. The draft 2023 update maintains the fundamental elements of the 2017 *Shaping SEQ* that aimed to "set the direction for sustainability, global competitiveness and high-quality living". The planning framework for the next 25 years is based on five strategic goals: grow, prosper, connect, sustain, and live.

In particular, *Shaping SEQ* addresses 'prosper' through a focus on regional economic clusters such as the Western Gateway, which will be further enabled by the development of Inland Rail (including the Project, which includes critical greenfield infrastructure within Inland Rail). *Shaping SEQ* recognises the role of Inland Rail in unlocking opportunities for the greater intensification and consolidation of industrial activities (and rail-dependent industries) within the western subregion.

Additionally, *Shaping SEQ* recognises the role of Inland Rail in improving national freight network connections, including sections to the port of Brisbane. This will support efficient freight movements, align with *Shaping SEQ*'s goal of 'connection', and contribute to economic development throughout SEQ.

SEQ Regional Freight Networks Strategy 2007–2012, Queensland Government

The South East Queensland (SEQ) *Regional Freight Network Strategy 2007–2012* (Queensland Transport, 2009) aims to 'facilitate freight moving efficiently across the transport network', enhancing economic development, safety, quality of life and environmental sustainability.

The *Regional Freight Network Strategy 2007–2012* acknowledges freight as an important issue for the region with the efficient movement of freight listed as crucial to industry and commercial productivity. Inland Rail is noted as having the potential to influence future freight movements and the development of the SEQ freight network.

The *Regional Freight Network Strategy 2007–2012* acknowledges the potential for Inland Rail to encourage mode shift from road freight to rail freight, in addition to opening up interstate rail freight movements entering SEQ from the west. The Project will play an important role in moving freight into SEQ from the west and is consistent with the Strategy's intent.

Darling Downs Regional Transport Plan 2019, Queensland Government

The *Darling Downs Regional Transport Plan (Darling Downs RTP)* outlines a shared direction for shaping the region's transport system over the next 15 years. The *Darling Downs RTP* sets out regional transport priorities

and actions for developing the transport system in a way that supports regional communities, growth, and productivity. The *Darling Downs RTP* details the economic importance of the relationship between infrastructure, transport, and land use.

The *Darling Downs RTP* recognises the vital role of the freight network (particularly rail freight) across the Darling Downs in supporting future trade development and growth of the region's export-orientated industries. The *Darling Downs RTP* highlights the potential for Inland Rail to enable improvements in supply chains and freight productivity. Specifically, Inland Rail has been identified as an opportunity to improve access to export gateways and affords the region the opportunity to be the gateway for southern Queensland and north-western New South Wales to local, national, and international markets.

Overall, the Project, as part of the broader Inland Rail Program, will increase the attractiveness and competitiveness of rail freight, consistent with the planning intention of the *Darling Downs RTP*.

Goondiwindi Regional Council Community Plan 2012-2022, Goondiwindi Regional Council

The *Goondiwindi Community Plan 2012-2022* describes a shared vision for the Goondiwindi community's future and economic growth. The Plan's economic priority is to develop 'a strong and sustainable regional economy that supports the growth of existing and new industry and business activities that enhance local lifestyle and provide long-term employment opportunities.'

As part of the broader Inland Rail Program, the Project has the potential to provide supply chain benefits and cost savings for freight companies and producers. Improvements to freight efficiency will improve the productivity of local industry and businesses, promoting employment and economic growth.

Through participation in the construction and ongoing operation of the Project, there are also opportunities to increase local businesses' capacity and worker capability.

Goondiwindi Regional Council Visitor Strategy 2022-2023, Goondiwindi Regional Council

The *Goondiwindi Regional Council Visitor Strategy* sets a strategic direction for the tourism industry in the region. The *Goondiwindi Regional Council Visitor Strategy* aims to retain current visitors while attracting new visitors to the area, in turn increasing visitor expenditure. The *Goondiwindi Regional Council Visitor Strategy* intends to increase tourism opportunities through a number of priorities and plans. The priorities explored include improving and promoting the lifestyle of the region and supporting community partnerships. The Goondiwindi Regional Council plans to support tourism projects throughout the community.

Due to a large agriculture industry, tourism makes up less than 10 per cent of Goondiwindi's economy. Key areas for future growth have been identified as visiting, recreational tourism, events, sporting carnivals, indigenous cultural tourism, and business and education.

Whilst the Project offers significant regional and state level economic benefits, Goondiwindi Regional Council has acknowledged during consultation that their budget allocation for infrastructure projects such as those put forward in the tourism strategy may be impacted by additional spending requirements resulting from the Project.

Toowoomba Regional Council Corporate Plan 2019-2024, Toowoomba Regional Council

The *Toowoomba Corporate Plan* sets a vision for a 'vibrant, inclusive and liveable region where respect for tradition and diversity is embraced'. This vision will be achieved through goals focusing on people, place, sustainability, prosperity, and performance.

The region aspires to achieve its 'prosperity' goal by leveraging opportunities inherent in major regional, State, and national infrastructure projects. Planning and investment in major infrastructure will support long-term economic growth, in addition to enhancing the identity of the region. 'Prosperity' has the potential to be achieved through the Project, as a major project with opportunities to promote employment and economic activity.

The *Toowoomba Corporate Plan* specifically highlights Inland Rail as a major development, with the potential to substantially elevate the Toowoomba region's economic role in Australia. Toowoomba's strong agricultural

foundation has given the region a competitive advantage in the agriculture industry. Inland Rail is recognised as a project that can enhance economic activity in the region and promote the development of other established industries such as freight and logistics.

Toowoomba Region Sustainable Transport Strategy 2014, Toowoomba Regional Council

The *Toowoomba Region Sustainable Transport Strategy* is a plan for the future integrity and sustainability of the transport system in Toowoomba. The *Toowoomba Region Sustainable Transport Strategy* provides the planning framework to improve the connectivity of the region and has been developed to complement upcoming infrastructure developments, including Inland Rail. Inland Rail is identified as a project that will significantly change how freight moves through the region.

Freight transport is identified as a major component of the *Toowoomba Region Sustainable Transport Strategy*, with a clear focus on supporting greater rail freight mode share (including mode shift from road freight). By supporting improved rail freight efficiency, the Project will encourage this mode shift, subsequently improving road safety and local traffic operations.

Toowoomba Region Economic Development Strategy – Bold Ambitions 2038, Toowoomba Regional Council

The *Toowoomba Region Economic Development Strategy* describes an ambition for the future economic position of the region. The vision states that by 2038 'the Toowoomba region has an internationally competitive, vibrant, diverse and inclusive economy that provides opportunities for employment, entrepreneurship and investment that enhance the region's lifestyle and environment.

The development of Inland Rail is included in the *Toowoomba Region Economic Development Strategy* as an opportunity to enhance the region's agricultural industry supply chain and increase the competitiveness of Toowoomba's agriculture in domestic and international markets. This is especially important in maintaining the region's role as an agricultural hub and pivotal freight and logistics centre. Industries such as food product manufacturing, machine manufacturing, and freight and logistics can capitalise on the freight link provided by the Project and the broader Inland Rail Program.

The *Toowoomba Region Economic Development Strategy* also mentions the opportunity for transport and logistics, and freight and warehousing business development as a result of the major road, rail, and infrastructure investment in the region. The Project alignment is adjacent to the Toowoomba Enterprise Hub, which includes the InterlinkSQ intermodal facility and Toowoomba Wellcamp Airport. The connection of the Project to this hub will enable the region to further capitalise on its export potential to Asia and other global markets through international exports out of the Toowoomba Wellcamp Airport. In addition, the *Toowoomba Region Economic Development Strategy* highlights the opportunity for further growth and development of these facilities as a result of Inland Rail. The Project has the potential to assist in facilitating greater intermodal opportunities and freight movements, in addition to supporting investment into these adjacent freight and logistics businesses.

Darling Downs Regional Plan 2013, Queensland Government

The *Darling Downs Regional Plan* reflects the planning and development interests articulated in the State's Planning Policy and sets the strategic direction for the Darling Downs region. The development of the Project is consistent with the intent of the *Darling Downs Regional Plan*, which lists priority outcomes for the region's transport network as including:

- Prioritisation of transport programs to improve freight movement and reduce conflicts in urban areas and with other network users; and
- Facilitating the role and function of airports and associated infrastructure in supporting economic development in Queensland.

The Project will unlock opportunities to better leverage the region's existing rail infrastructure, increase economic development and support a modal shift towards increased rail freight. While the Project is not a complete greenfield segment, there are sections along the existing alignment that will be enhanced.

The Project is consistent with the *Darling Downs Regional Plan*'s intent to maintain the eastern area of the Darling Downs region as the major transport and service hub of the region. The Project, as part of the broader Inland Rail Program, will enable the region's transport network to continue to facilitate the movement of goods and resources between Queensland's south-east and west, enabling access to domestic and international markets through strategic ports along the east coast.

2 Methodology

2.1 Impact assessment area

The Project traverses two local government areas (LGAs) – Goondiwindi and Toowoomba. Combined, these LGA boundaries form the **impact assessment area** for assessing the local economic impacts of the Project, reflecting a local catchment for workers and economic activity.

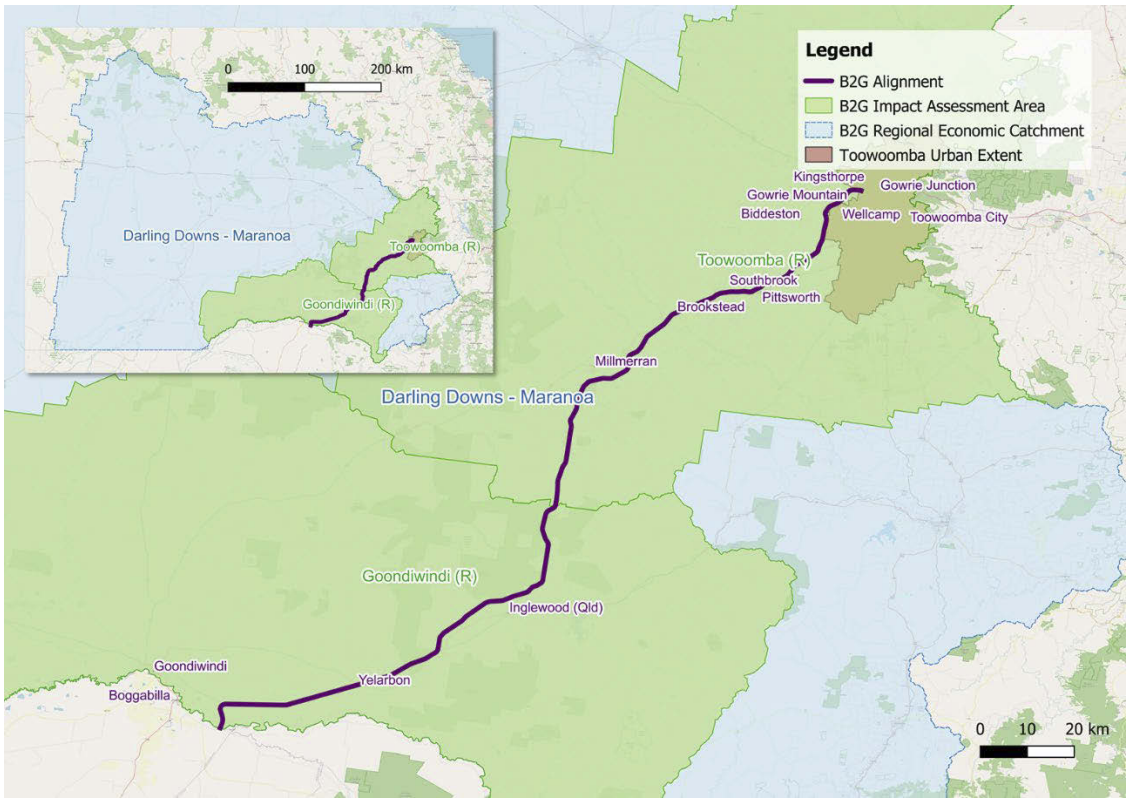
For the purposes of the regional impact analysis, the **regional economic catchment area** is defined as the Australian Bureau of Statistics (ABS) labour market region boundaries of the Australian Statistical Geography Standard that captures the regional economy within which the Project is located. The Project is located within the Darling Downs – Maranoa labour market region and this region is defined as the regional economic catchment.

The Project impact assessment area and regional economic catchment are shown in Figure 1. It is important to note that from a spatial perspective, the geographic boundaries of the Darling Downs – Maranoa region do not capture the Toowoomba Urban Extent (the orange-shaded area in Figure 1). While the economic impact assessment that is based on the wider Darling Downs – Maranoa region captures most of the Toowoomba LGA boundaries, potential impacts associated with the Toowoomba Urban Extent are not included in the analysis.

Area Definitions:

- **Impact assessment area:** Goondiwindi and Toowoomba Local Government Areas (Toowoomba City is included in this assessment as it is part of the Toowoomba LGA).
- **Regional economic catchment area:** Darling Downs – Maranoa Statistical Area Level 4 (SA4).

Figure 1: The Project impact assessment area and regional economic catchment



Source: ARTC

Importantly, this EIA acknowledges the potential impacts of the Project on local residents, businesses and industry within the impact assessment area and regional economic catchment, in addition to the surrounding areas, particularly at the Project extent. This EIA also acknowledges the proximity of the Project to regional communities in northern New South Wales, particularly within the Moree Plains and Gwydir LGAs at the southern extent of the Project alignment.

There are a number of population centres (ABS defined Suburbs and Localities) that are located within proximity to the Project, including Boggabilla, Toomelah, Goondiwindi, Inglewood, Yelarbon, Millmerran, Brookstead, Pittsworth, Southbrook, Biddeston, Kingsthorpe, Wellcamp, Gowrie Mountain, Gowrie Junction and Toowoomba.[22] As a result of their proximity to the Project, these communities may be impacted during the construction or operation of the Project. These population centres align with ARTC's local business and industry participation catchment.

Boggabilla

Located within the Moree Plains LGA, Boggabilla is a small locality sitting on the southern side of the New South Wales / Queensland border approximately nine kilometres south-east of Goondiwindi. Boggabilla is serviced by the Newell Highway to the north and south and the Bruxner Highway to the south-east. As of the 2021 Census, Boggabilla had a population of 529 persons. The locality has a high Indigenous population, with 43.5 per cent of the population identifying as Aboriginal and/or Torres Strait Islander.

[22] Boggabilla and Toomelah are defined as Localities (ABS Urban Centres and Localities).

Toomelah

Toomelah is an Aboriginal community located east of the most southerly part of the Project. Approximately 93.6 per cent of the locality's small population (of 187 persons) identify as Aboriginal and/or Torres Strait Islanders. There are strong community links between the Boggabilla and Toomelah communities.

Goondiwindi

Located within the Goondiwindi LGA, Goondiwindi sits on the northern side of the Macintyre River, forming part of the New South Wales / Queensland border. The town is situated approximately 300 km south-west of Brisbane and is connected by the Newell Highway, Cunningham Highway and Leichhardt Highway. Goondiwindi's local economy is driven by strong agricultural production due to its location on the floodplains of the Border Rivers basins. The area has a population of 5,439 persons.

Inglewood

The town of Inglewood sits within the Goondiwindi LGA and is the second-largest town in the Goondiwindi region. The town is accessed by the Cunningham Highway, located approximately 270 km from Brisbane and 150 km from Toowoomba. It forms part of the Border Rivers region of waterways and is the crossroad for major stock routes, joining Texas to the south and Millmerran to the north-west. Inglewood has a population of 760 persons. Local agricultural land use is predominantly sheep and cattle grazing, timber milling and cropping.

Yelarbon

Yelarbon is a small town that sits midway between Goondiwindi and Inglewood, accessed by the Cunningham Highway. The town sits within the Goondiwindi LGA and is approximately 300 km from Brisbane and 200 km from Toowoomba, bounded in the south and east by the Macintyre Brook. According to the *SEQ Regional Plan*, Yelarbon is a Priority Living Area.[24] The area has a population of 313 persons.

Millmerran

Millmerran is located within the Toowoomba LGA, approximately 75 km south-west of Toowoomba and 200 km west of Brisbane. The Project is located approximately three kilometres south-east of Millmerran and access to the town is provided by the Gore Highway. The township's land uses are largely low-medium density residential, community spaces including sport and recreation and a main street commercial zone, with some medium impact manufacturing / industrial uses at the terminus of the rail line. An industrial area located to the north of the town is zoned for High Impact Industry (Toowoomba Regional Council, 2018). Millmerran has a population of 1,545 persons.

Brookstead

Brookstead is a small town located within the Toowoomba LGA. The Condamine River forms the western boundary of the town, with access provided by the Gore Highway. It is located approximately 60 km south-west of Toowoomba city centre. Brookstead includes residential, community and industrial uses, with the surrounding area used predominantly for irrigated agriculture and cropping. Brookstead has a population of 182 persons.

Pittsworth

Pittsworth is located within the Toowoomba LGA, approximately 170 km south-west of Brisbane and 41 km south-west of Toowoomba. The town is dissected by the Millmerran Branch Line (rail), and access to the town is provided by the Gore Highway. Pittsworth is a service centre for the surrounding agricultural area and is well

[24] A Priority Living Area (PLA) is an area of regional interest under the *Regional Planning Interests Act 2014* (RPI Act). A PLA is an area that includes the existing settled area of a city, town or other community and other areas necessary or desirable: a) for the future growth of the existing settled area; and b) as a buffer between the existing or a future settled area and resource activities. Queensland Department of State Development, Manufacturing, Infrastructure and Planning.

defined as a commercial/retail corridor. According to the *SEQ Regional Plan*, the area (and a buffer of up to three kilometres) is a Priority Living Area, with the surrounding area a Priority Agricultural Area. Pittsworth has a population of 3,300 persons.

Southbrook

Southbrook is a town north-east of Pittsworth and is part of the Toowoomba LGA. The Gore Highway passes through the north of the town and forms the main access route. Southbrook is approximately 30 km from Toowoomba and 155 km from Brisbane. The area is designated as a Priority Living Area, and land use outside of the township includes dry land cropping, grazing and limited irrigated agriculture (designated a Priority Agricultural Area). Southbrook has a population of 626 persons.

Biddeston

Biddeston is located in the Toowoomba LGA, approximately 24 km west of Toowoomba along Toowoomba Cecil Plains Road. The town includes some rural residential dwellings, cropping, dairying, dryland production and grazing agricultural properties. Biddeston has a population of 269 persons.

Kingsthorpe

Kingsthorpe is a town located 16 km north-west of Toowoomba and 147 km west of Brisbane in the Toowoomba LGA. The area is bounded by Westbrook Creek to the south and the Western Line Railway to the north. Access to the town is provided by the Warrego Highway. Land use in the area includes residential, commercial, and recreational uses as well as cropping and grazing agriculture. Kingsthorpe has a population of 2,159 persons.

Wellcamp

Wellcamp is located within the Toowoomba LGA, 15 km west of Toowoomba, and is the location of the Toowoomba Wellcamp Airport and surrounding industrial precinct. Land use in the area is predominantly industrial uses and open space, with rural Wellcamp access via Toowoomba Cecil Plains Road and bounded by Dry Creek to the north and Spring Creek to the south. The area has a population of 346 persons.

Gowrie Mountain

Gowrie Mountain is a small residential locality on the western side of 'Gowrie Mountain', located within the Toowoomba LGA. The area has a population of 222 persons. Residential lots are characterised as large lifestyle blocks, and access to the area is provided by the Warrego Highway and Jannuschs Road. Gowrie Mountain is approximately 20 km from Toowoomba and 145 km from Brisbane.

Gowrie Junction

Gowrie Junction is a town located in the Toowoomba LGA, approximately 10 km north-west of the Toowoomba city centre. The town is bounded by the ridges of Mount Kingsthorpe to the north and is dissected by Gowrie Creek. Access to the town is provided by the Warrego Highway. Land uses include residential and intensive uses in the township, grazing native vegetation, irrigated cropping, and cropping (with some limited conservation and natural environments) in the surrounds. Gowrie Junction has a population of 2,242 persons.

Toowoomba City

Toowoomba City is a town located in the Toowoomba LGA, approximately 125 km west of Brisbane. According to the *SEQ Regional Plan*, the area is designated as an urban footprint. Toowoomba City is on the crest of the Great Dividing Range, with the town's urban land use located to the west of the divide. Access to and through Toowoomba is provided by the Warrego Highway. Toowoomba City has a population of 2,321 persons.

There are a number of other small communities adjacent to the Project, including Kurumbul (46 people), Whetstone (65 people), Canning Creek (five people), Bringalily (83 people), Millwood (23 people), Clontarf (25 people), Yandilla (46 people), Pampas (62 people), Umbiram (139 people), and Athol (134 people). These communities are described in the Social Impact Assessment (Appendix X).

2.2 Assessment methodology

The EIA has been developed according to the Coordinator-General's Economic Impact Guidelines. Accordingly, the approach adopted for this EIA is reflective of the recognised industry approach to undertaking an EIA. It represents a whole-of-life approach, comprising an evaluation of the economic impacts and benefits generated by the Project across both the Construction Works and Operations stages. Furthermore, the report considers the cumulative impacts and benefits that will be realised due to the development and operation of adjacent and complementary projects. The EIA methodology has been endorsed by the Office of the Coordinator-General.

Following the initial public notification period for the draft EIS, this EIA also addresses additional RFI requirements from the Office of the Coordinator-General.

Specifically, this assessment:

- Establishes the **existing economic environment and local context** to understand the local economic context and form the basis to measure the economic impacts;
- Identifies potential **economic benefits and impacts** on affected local and regional communities and businesses. This was drawn from local community consultation and industry engagement undertaken by ARTC, evaluation of publicly available information, and the outputs from the Social Impact Assessment and Land Use and Tenure Assessment;
- Assesses the projected economic benefits of the Project, including the basis for their estimation through a detailed economic benefits assessment. The outcomes of the proposed Project segment-specific analysis have been contextualised against the results of the **cost-benefit analysis** (CBA) undertaken for the entire Inland Rail Program, in accordance with the *Inland Rail Programme Business Case (2015)*;
- Assesses the economic significance of the Project on the regional, State and national economies through **computable general equilibrium (CGE) modelling**;
- Evaluates the potential **cumulative impacts** on local and regional economies resulting from the construction and operation of related projects, including adjacent Inland Rail project sections; and
- Proposes measures to enhance economic benefits and to avoid, mitigate or manage adverse economic impacts.

Stakeholder consultation overview

ARTC has undertaken consultation with the community and various stakeholders, including local businesses, throughout the design process for the Project. Multi-disciplinary technical study teams have considered community and stakeholder feedback to define the Project's revised reference design and prepare the EIS. Consultation is ongoing and stakeholder engagement will continue as the Project progresses through detailed design and implementation.

Key stakeholder groups consulted who are relevant to the EIA include:

- Australian Government stakeholders
- Queensland Government stakeholders
- Local government stakeholders
- Local community organisations including:
    - Directly impacted landowners
    - Indirectly impacted landowners
    - Community action groups (Inner Downs Inland Rail Action Group and Millmerran Rail Group)

  - Community Consultative Committees (CCCs) (Inner Darling Downs and Southern Darling Downs)
  - Business and industry groups (Toowoomba and Surat Basin Enterprise, Toowoomba Chamber of Commerce, Pittsworth Alliance, Goondiwindi Chamber of Commerce and Millmerran Commerce and Progress Association
  - Community groups (various)
  - Community (general)
- Other key stakeholders including
  - Emergency and health providers
  - Utility service providers
  - Gas, petroleum and energy asset owners
  - Indigenous groups and representatives
  - Peak bodies
  - Education and training
  - Media

For more detailed information on stakeholders consulted as part of the consultation process, please refer to the Consultation Report (Appendix E).

Section 5.5 (Business and industry impacts) of this EIA summarises economic considerations raised during engagement with affected business owners and economic considerations raised by affected property owners. Economic related issues raised during engagement and where they have been addressed in the EIA are outlined in Table 6. Refer to Social Impact Assessment (Appendix X) for further details on the outcomes of community engagement.

Table 2-1: Economic related issues raised during stakeholder consultation

Economic related issues	Where addressed in this EIA
Impacts on cultural landscapes and local character	Section 5.5.2 Tourism industry
Impacts of property acquisition and property severance	Section 5.5.1 Agricultural industry Section 5.5.4 Local businesses
Impacts of changes to flood patterns on homes, farms and agricultural land	Section 5.5.1 Agricultural industry
Impacts on rural amenity	Section 5.5.2 Tourism industry Section 5.5.4 Local businesses
Changes to connectivity within and between properties	Section 5.5.1 Agricultural industry Section 5.5.4 Local businesses
Impact on local housing access, in the context of very low rental housing availability	Section 5.2.1 Direct employment Section 5.5.2 Tourism industry
Potential to draw skilled workers from local businesses and services, in the context of low unemployment rates	Section 5.2 Workforce impacts
The value of Project opportunities to local and regional businesses	Section 5.4 Regional economic impact analysis
Impacts of construction on groundwater access for farms and businesses	Section 5.5.1 Agricultural industry
The need for legacies which benefit local communities	Section 5.7 Legacy impacts

Source: Appendix X: Social Impact Assessment

2.2.1 Existing economic environment

This section describes the existing economic profile of the impact assessment area and provides a baseline for the assessment of the potential economic impacts of the Project. The economic baseline includes key socio-economic characteristics and identifies existing economic activities in the impact assessment area. This section has been developed based on data and information sourced from:

- Strategic economic development, transport and community plans for the impact assessment area and regional economic catchment (see Section 1.3 of this EIA);
- ABS 2021 Census of Population and Housing;
- ABS Regional Population Growth, 2019-20;
- Queensland Government Statistician's Office 2021 edition population estimates;
- Queensland Government Statistician's Office 2023 edition population projections;
- ABS, Labour Force Survey, Australia, June 2022;
- Australian Government's Small Area Labour Markets publication, September 2023; and
- Consultation with local businesses and industry, government agencies, peak bodies and the community undertaken by ARTC.
- Tourism Research Australia, 2023

2.2.2 Economic benefits assessment

A large proportion of the benefits of the Inland Rail Program stem from improving the connection between producers and markets; through both domestic markets in cities and international markets through ports. Due to the structure of the EIS (assessing each of the 12 Inland Rail project sections in isolation from the entire Program), an incremental CBA approach assessing each segment of Inland Rail individually will not capture the full impact that is expected to be delivered upon completion of the entire Melbourne to Brisbane connection. Put simply, the benefits of the Inland Rail Program will outweigh the sum of the individual projects.

Accordingly, for the purposes of this EIA, there are two components to the assessment:

1. Evaluation of the likely benefits of the discrete Project (economic benefits assessment). This analysis assesses only those impacts that would be likely if freight operators were to respond to the completion of the individual Project. While the scope of this EIA is to assess the core Inland Rail infrastructure, it is recognised that ancillary infrastructure has the potential to support the realisation of additional economic benefits to the local community.
2. Description of the CBA economic performance measures calculated for Inland Rail as a whole (in accordance with the *Inland Rail Programme Business Case (2015)*).

The approach to the economic benefits assessment draws from the existing literature and guidelines surrounding the economic appraisal of infrastructure projects, including, but not limited to:

- *Infrastructure Australia's Assessment Framework*;
- *Queensland Government's Project Assessment Framework (PAF)* guidance material;
- *Transport for New South Wales Cost-Benefit Analysis Guide (2019)* and *Economic Parameter Values (2020)*; and
- *The Australian Transport Assessment and Planning (ATAP) Guidelines*.

2.2.3 Regional impact analysis

A regional impact analysis has been undertaken to highlight the economic impacts of the Project on the regional, State, and national economies using an equilibrium modelling framework. For the purposes of this analysis, a CGE model has been developed to examine the flow-on impacts arising from the Project on the broader economy. These impacts have been modelled using KPMG-SD, a proprietary regional CGE model of the Australian economy developed and maintained by KPMG.

KPMG-SD is ideally suited to quantifying the industry, regional and economy-wide impacts of major projects such as Inland Rail because it can capture the upstream and downstream linkages between a project's activities and the rest of the economy. KPMG-SD also provides estimates of employment supported through these investments, noting that estimates of employment produced by the model reflect the direct and indirect jobs generated across the economy.

As described above, the regional economy is represented by the Darling Downs – Maranoa labour market region.

2.2.4 Local economic impact assessment

This section describes the potential economic impacts resulting from the Project on local businesses, industries, and the community. This assessment has been developed based on:

- Consultation with the local community undertaken by ARTC (see Appendix E: Consultation Report for details on community consultation);
- The outcomes of the Social Impact Assessment (Appendix X) process to identify local and regional business capacity, aspirations and initiatives; and
- The outcomes of the Land Use and Tenure Assessment (EIS Chapter 8) to identify local and regional impacts on industry resulting from land use changes.

2.2.5 Cumulative impact assessment

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

In considering the cumulative impacts of the Project, it is necessary to identify the range of existing, planned, and potential projects, within or adjacent to the impact assessment area, that may contribute to local and regional economic impacts. Cumulative impacts may result from the spatial and/or temporal interaction between these projects.

This cumulative impact assessment has two components:

1. Quantitative regional impact analysis of the construction of the Queensland portion of Inland Rail and two Inland Rail sections in northern New South Wales that have an overlapping timeline with the construction of the Project – Narrabri to North Star and North Star to Border on the regional, State, and national economies using an equilibrium modelling framework (using KPMG-SD)
2. Qualitative assessment of the cumulative impact of state-significant projects (that have been identified by ARTC as having a relationship to the Project - see Appendix A of this document) on labour markets, the supply chain and local businesses.

2.2.6 Assumptions of the assessment methodology

The findings of this EIA are subject to the following assumptions:

- This assessment has not been prepared to inform financial or commercial decision-making processes. The sole purpose of the impact assessment is to meet the requirements of the Coordinator-General's *Economic Impact Guidelines* and address additional information requirements for the EIS, issued following Coordinator-General's review of comments received during the public notification stage of the Project.

- Demand inputs to the economic benefits assessment have been sourced from the freight demand projections developed by ACIL Allen Consulting for the *Inland Rail Programme Business Case (2015)*. These values have been apportioned based on the information available to represent freight movements that would benefit from the improved rail connectivity provided by the Project and represent those that are reasonably likely to make use of the Project as an independent project.
- ARTC notes indicate, although other technical and economic data are expected as each project progresses through design development, the *Inland Rail Programme Business Case* endorsed by the Australian Government is currently the most detailed assessment for the Inland Rail Program. For this reason, and in the interests of maintaining consistency, demand profiles for the Inland Rail economic impact assessments have been based on the *2015 Inland Rail Programme Business Case*.
- This assessment assumes capital expenditure consistent with the ARTC budget reset completed in September 2020, which was the most up-to-date information available at the time of drafting this EIA. Revised capital expenditure figures include up-to-date costs for landholder compensation, land acquisition costs, offsets, grade separations, noise mitigation, realignments and design refinements. Revised capital expenditure figures have been escalated to 2022 prices for the purposes of this EIA.
- A large proportion of the benefits of Inland Rail stem from improving the connection between producers and markets, through both domestic markets in cities and international markets through ports. As such, an incremental EIA approach assessing each segment of Inland Rail individually and in isolation from the entire Program will not capture the full impact that is expected to be delivered upon completion of the entire Melbourne to Brisbane connection.

3 Project description

The Project is a 217.48 kilometre (km) section of new dedicated single-track, open-access freight railway between the New South Wales (NSW)/Queensland (QLD) border and Gowrie, in Queensland. The Project is comprised of 7 km of standard-gauge rail (1,435 millimetres (mm)) and 210.48 km of dual standard/narrow-gauge rail (1,435 mm standard and 1,067 mm narrow). The new railway will comprise approximately 149.48 km of new rail corridor (greenfield) and approximately 68.00 km of existing open access rail corridor (brownfield), that forms part of Queensland Rail's (QR) South Western Line and Millmerran Branch Line.

Where possible, the Project has been aligned to utilise the existing rail corridors of the South Western System, then north to Toowoomba and south to Wallangarra, and includes a branch line to Millmerran. Specifically, the new railway will be positioned within approximately 149.48 km of new rail corridor (greenfield) and approximately 68 km of existing open access rail corridor (brownfield), that forms part of Queensland Rail's (QR) South Western Line and Millmerran Branch Line.

A temporary material distribution centre (MDC) has been proposed to be established in Whetstone, Queensland. The Whetstone MDC will be used to support the construction of the Project and the overall Queensland Inland Rail Program. Detailed information about the Whetstone MDC can be found in Appendix AE: Whetstone MDC Preliminary Environmental Assessment.

The key components of the Project are detailed in Table 7 below.

Table 3-1: Key components of the Project

Key Component	
Start and finish point	New South Wales / Queensland Border and Gowrie Junction
Local government areas	Goondiwindi Local Government Area; Toowoomba LGA
Length of alignment	217.48 km total length
Key features	• 32 new rail bridges and five new road bridges – 34 new bridge structures (14 Rail over Road, 18 Rail over watercourse, five Road over Rail) • Two turnouts to the South Western Line (Kildonan and Whetstone) and two turnouts to the Millmerran Branch Line (Millmerran and Yarranlea) • Turnouts and five new crossing loops (Yelarbon, Inglewood, Koorangarra, Yandilla and Broxburn) • Nine State-controlled roads directly impacted • Eight turnouts to existing Queensland Rail sidings and loops (3x Kurumbul, 3x Yelarbon, and 2x Brookstead) • Ancillary works including non-resident workforce accommodation facilities, borrow pits, concrete batch plants, road and public utility crossings and realignments, fencing and provision of services within the corridor and Rail Maintenance Access Road (RMAR)
Train lengths	Up to 1,800 m in length
Construction	Commencement in mid-2024, with construction expected to be completed in early-2028 [25]
Operation	Early-2028
Employment	**Construction employment:** Preliminary estimates indicate that the workforce on site for the Project will average approximately 383 FTE over the construction period, with a peak of approximately 900 FTE around week 80 of construction. **Operation employment:** Preliminary estimates indicate a workforce of between 10 to 15 personnel, some of whom may be drawn from the study area, will be needed following project construction.

[25] Construction schedules assumed for the purposes of EIS technical assessments have been based on information available at the time of assessment and are subject to change.

4 Existing economic environment

This section describes the key demographic and socio-economic characteristics of the impact assessment area, including the local population, and the existing regional and local economic environment. Unless otherwise stated, all information has been drawn from the *ABS 2021 Census of Population and Housing*.

The most recent, publicly available data has been used to describe the labour market and employment characteristics of the impact assessment area. The data is reflective of the changes in demographic, employment outcomes and market conditions resulting from the economic shock associated with COVID-19 in 2020 and 2021. It includes the consideration of pandemic-related stimulus project impacts on the labour market and reflects current market conditions at the time of drafting this EIA.

4.1 Population summary

4.1.1 Population and age profile

In June 2021, the impact assessment area had an estimated resident population of 185,655 people.[27] Between 2011 and 2021, the population of the impact assessment area grew at an average annual rate of 1.10 per cent, due to a decline in growth in Goondiwindi (-0.47 per cent) and growth in Toowoomba (1.20 per cent). In comparison, the population in Queensland grew at an average annual rate of 1.54 per cent over the same period. Population growth across the impact assessment area is projected to continue to slow to 2031, increasing by approximately 14,395 persons to reach 200,050 residents (at an average annual rate of 0.75 per cent).[28] Most of this projected growth will occur in Toowoomba (average annual growth of 0.82 per cent), with the population in Goondiwindi projected to decrease by 492 people over this period (average annual decline of -0.48 per cent). By comparison, the population across Queensland is projected to increase at an average annual rate of 1.54 per cent by 2031.

Within Goondiwindi, historical and projected population growth reflects an ongoing trend in rural Queensland as the population, particularly young people, leave rural areas and relocate to larger, urbanised areas to access employment, education, and social opportunities.[29]

The impact assessment area is expansive, covering 32,222.9 km^2 comprising both rural and urban areas. Goondiwindi is predominately a rural area with a geographically dispersed population, characterised by low population density and large areas of farmland (density of 0.54 persons per km^2).[30] There are a number of urban areas within Goondiwindi in its townships (e.g. Goondiwindi and Inglewood). Toowoomba is a growing residential area, with a population density of 13.5 persons per km^2.[31] The area is comprised of significant rural and rural-residential areas, and some industrial and commercial land use. A summary of Census population data and growth estimates can be seen in Table 8 below.

[27] Population estimates: Regions - Estimated resident population by LGA, 2001 to 2022r.
[28] QGSO 2023 Projected population, Queensland and regions, 2021 to 2046, by LGA, medium series
[29] ABS, Australian Social Trends, cat.no. 4102.0.
[30] ABS 2021, Regional population, 2021-2022 - Table 3 Estimated resident population, LGAs, Queensland.
[31] ABS 2021, Regional population, 2021-2022 - Table 3 Estimated resident population, LGAs, Queensland.

Table 4-1: Estimated resident population and projections, impact assessment area

	2011	2021	2031	CAGR 2011-2021	CAGR 2021-2031
Goondiwindi LGA	10,900	10,400	9,908	-0.47%	-0.48%
Toowoomba LGA	155,473	175,255	190,142	1.20%	0.82%
Impact Assessment Area	**166,373**	**185,655**	**200,050**	**1.10%**	**0.75%**
Queensland	4,476,778	5,215,814	6,079,887	1.54%	1.54%

Source: QGSO 2023, Population estimates: Regions - Estimated resident population by LGA, 2001 to 2022r; QGSO 2023, Projected population by five-year age group and sex , Queensland and regions, 2021to 2046, by LGA, medium series.

The current and projected age profile for the impact assessment area reflects a broader trend of a rapidly increasing cohort of an ageing population, particularly in regional and rural areas across Australia. The proportion of the population aged 65 years or older is projected to increase to represent close to one-quarter of the population by 2031 (24.5 per cent from 19.1 per cent in 2021). [32] Within the impact assessment area, this trend is projected to be most pronounced in Goondiwindi, with the proportion of the population aged 65 years or older projected to increase from 18.8 per cent in 2021 to 25.7 per cent by 2031. [33] At a State level, the proportion of the Queensland population aged 65 years or older is projected to increase from 16.6 per cent to 22.1 per cent over the same period. [34]

Currently (2021), 61.0 per cent of the impact assessment area's population are of working age (15 to 64 years) compared to a State average of 64.5 per cent. [35] By 2031, this population segment is projected to remain steady, representing 61.1 per cent of the population across the impact assessment area. [36] This can be attributed to the region's slow growth and ageing population, with the working-age population in Goondiwindi projected to represent 54.6 per cent of the population by 2031 (from 59.9 per cent in 2021). [37] A declining working population may reduce the available local supply of relevant qualified skilled or non-skilled workers which may act as a barrier to regional population and economic growth.

4.1.2 Indigenous population

The proportion of the population that identify as Indigenous (Aboriginal, Torres Strait Islander, or both) within the impact assessment area is larger compared to the proportion seen across Queensland as a whole (5.16 per cent compared to 4.60 per cent). Within the impact assessment area, Goondiwindi has a higher Indigenous population, representing 7.77 per cent of the total population compared to 5.0 per cent in Toowoomba.

[32] QGSO 2023, Population estimates: Regions, Age, and sex indicators, LGA, 30 June 2022r; QGSO 2023, Projected population by five-year age group and sex, Queensland, and regions, 2021 to 2046, by LGA, medium series.

[33] QGSO 2023, Population estimates: Regions, Age, and sex indicators, LGA, 30 June 2022r; QGSO 2023, Projected population by five-year age group and sex, Queensland, and regions, 2021 to 2046, by LGA, medium series.

QGSO 2023, Population estimates: Regions, Age, and sex indicators, LGA, 30 June 2022r; QGSO 2023, Projected population by five-year age group and sex, Queensland, and regions, 2021 to 2046, by LGA, medium series

[35] QGSO 2023, Population estimates: Regions, Age, and sex indicators, LGA, 30 June 2022r.

[36] QGSO 2023, Projected population by five-year age group and sex, Queensland, and regions, 2021 to 2046, by LGA, medium series.

[37] QGSO 2023, Population estimates: Regions, Age, and sex indicators, LGA, 30 June 2022r; QGSO 2023, Projected population by five-year age group and sex, Queensland, and regions, 2021 to 2046, by LGA, medium series.

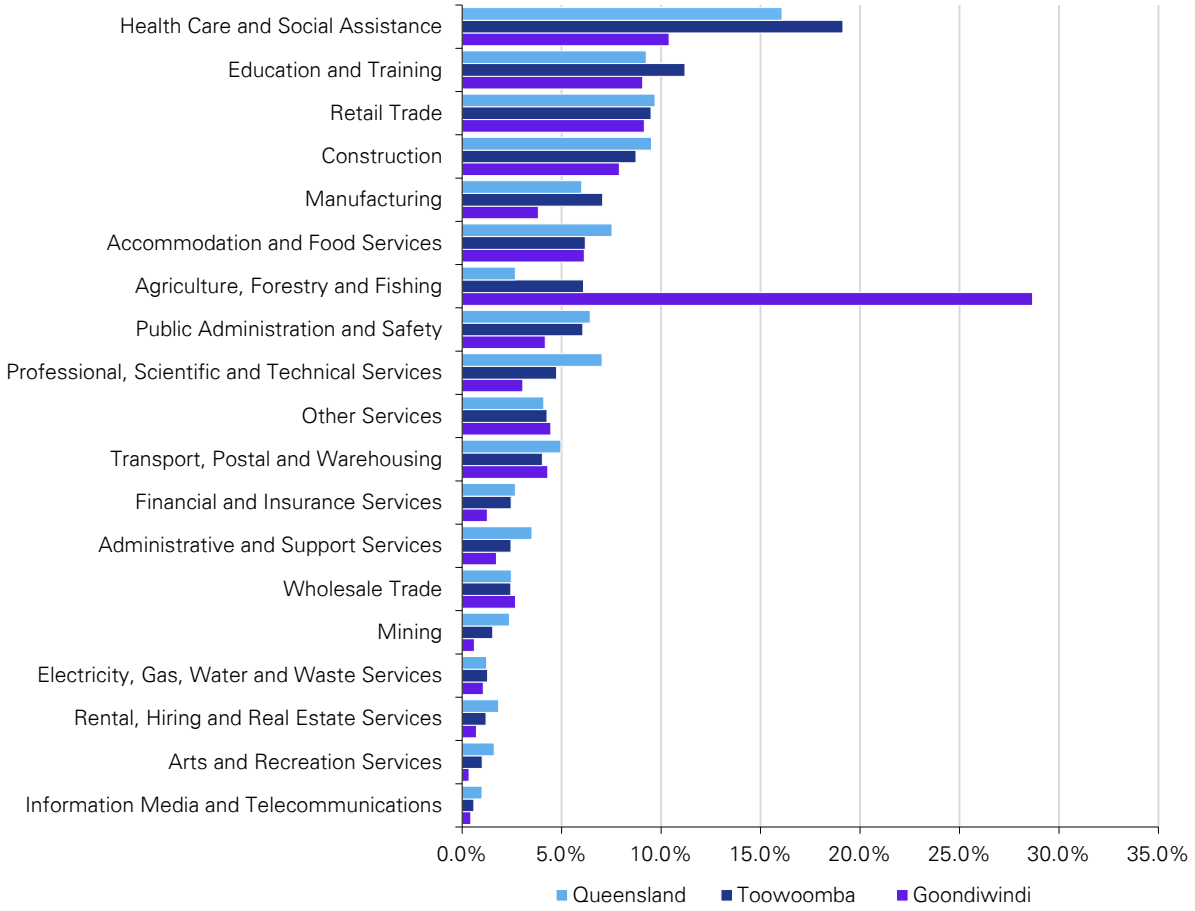
4.2 Description of the economy

4.2.1 Labour market and employment characteristics

Employment by industry

As shown in Figure 2 below, the sectoral distribution of employment for local residents varies between the Goondiwindi and Toowoomba LGAs that form the impact assessment area, reflecting the diverse land use and the geographic distribution of the population across the two impacted LGAs.

Figure 2: Industry of employment for those living within the impact assessment area (place of usual residence), 2021[39]



Source: ABS 2021 Census of Population and Housing (excluding not applicable)

In Goondiwindi, the Agriculture, Forestry and Fishing industry employs over one-quarter of the working population (28.7 per cent). Within this industry, the primary source of employment is in Sheep, Beef and Grain Farming, employing 61.2 per cent of the Agriculture, Forestry and Fishing industry workers and 17.8 per cent of Goondiwindi's working population.

In Toowoomba, the largest proportion of workers are employed in service-based industries, such as Health Care and Social Assistance (19.1 per cent), Education and Training (11.2 per cent) and Retail Trade (9.5 per cent).

There are a number of residents within the impact assessment area employed in directly relevant industry sectors and occupations to support the construction of the Project. According to the 2021 Census, 8.7 per cent

[39] Industry data from the ABS Census does not detail the industry information (i.e. employment) for the tourism and defence industries. As these two industries are captured in other industry types; overlapping several product categories in the Australian and New Zealand Standard Industrial Classifications (ANZSIC).

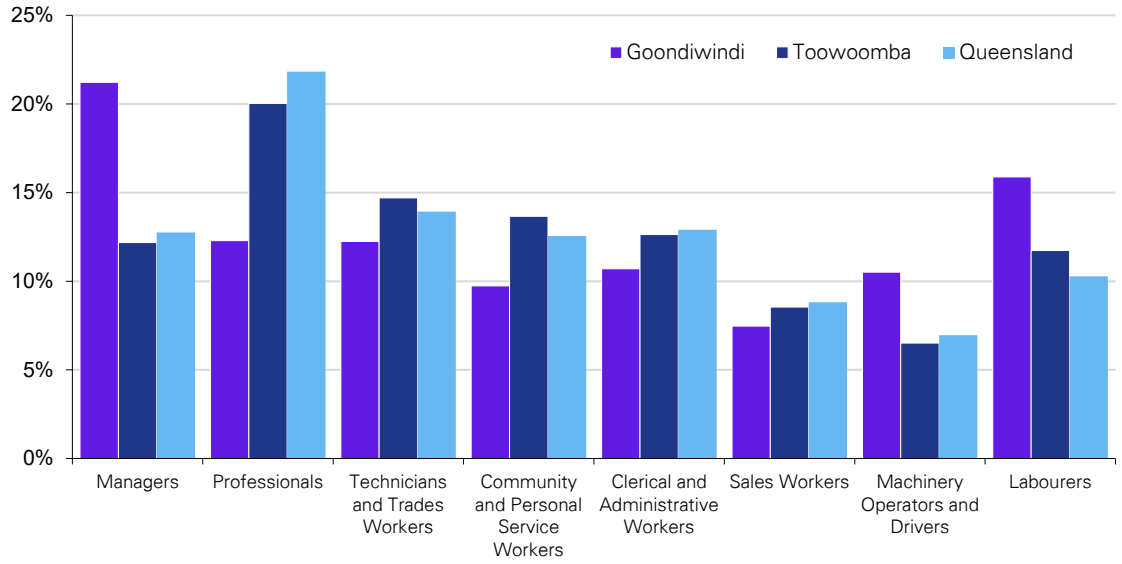
of the total workforce are employed in the Construction industry (7,049 workers), with the largest proportion of workers residing in Toowoomba (6,686 workers). Within the Construction industry, 10.9 per cent of local workers are employed in Heavy and Civil Engineering construction (766 workers). Across the broader Darling Downs - Maranoa region, 4,488 workers are employed in the Construction industry, with 16.4 per cent of the region's workers in Heavy and Civil Engineering construction (736 workers) and 58.2 per cent in Construction Services (2,614 workers).

Occupation

The impact assessment area's primary occupations of employment reflect the area's industry profile and distribution of employment across industries. At the broadest level, the area has a higher proportion of Managers, Machinery Operators and Drivers, and Labourers than the Queensland average (see Figure 3).

More specifically, within Goondiwindi, the largest proportion of workers are employed as Farmers and Farm Managers (12.4 per cent), followed by Farm, Forestry and Garden Workers (6.4 per cent). This reflects the area's industry strength in Agriculture, Forestry and Fishing. In Toowoomba, the largest proportion of workers are employed as Carers and Aides (7.6 per cent), Sales Assistants (6.3 per cent) and Health Professionals (6.2 per cent). Across the impact assessment area, 1,041 workers were employed as Construction Labourers or Mining Labourers (1.3 per cent).

Figure 3: Local worker's occupation, by place of usual residence, impact assessment area, 2021



Source: ABS 2021 Census of Population and Housing (excluding not applicable)

Labour force

The most recent national unemployment statistics indicate that in June 2023, the unemployment rate was 2.9 per cent in the Darling Downs – Maranoa region, below the national and State historically low rates of 3.3 per cent and 3.7 per cent respectively.[40]

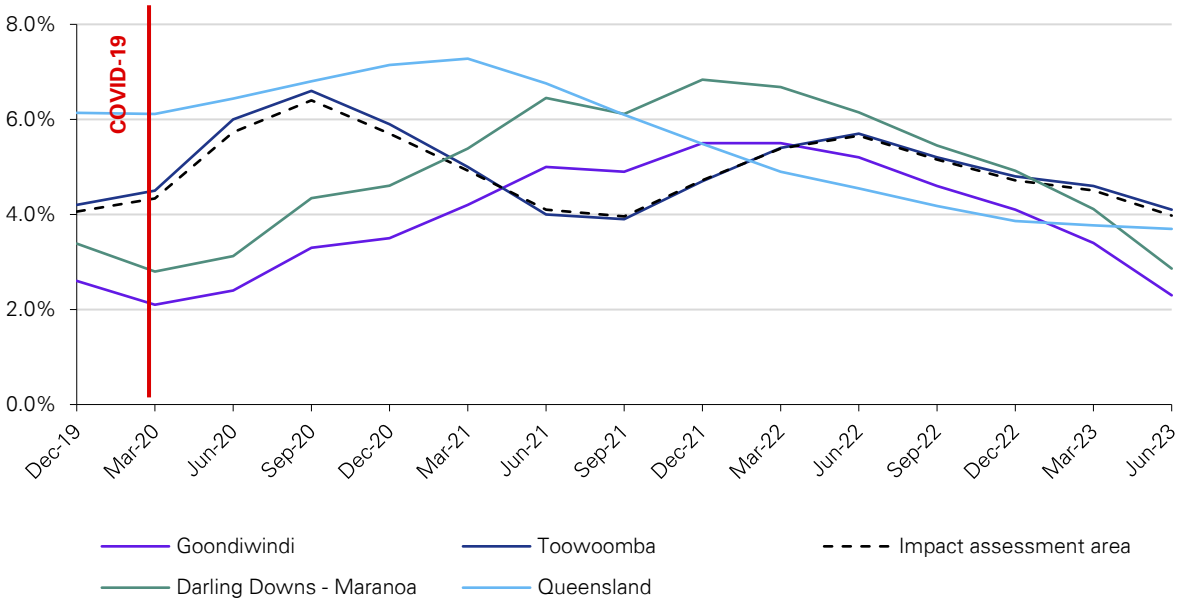
From March 2020, the COVID-19 global pandemic and public health crisis resulted in a significant reduction in income, a rise in unemployment, and disruptions in the transportation, service, and manufacturing industries. The impacts of the pandemic resulted in the unemployment rate in the Darling Downs – Maranoa region peaking at 6.8 per cent in the December 2021 quarter, a 2.2 per centage point increase from December 2020.

As the Australian economy continues to respond to the impacts of the COVID-19 pandemic, rising inflation, in part caused by labour tightness, has caused the Reserve Bank to increase interest rates. Continued and

[40] ABS, *Labour Force Survey*, cat. no. 6291.0.55.001. Released 2023..

sustained increases in interest rates have the potential to deteriorate labour market conditions if the economy begins to decline. From this and as shown in Figure 4, it is evident that the current labour market conditions remain unpredictable.

Figure 4: Unemployment rates during the COVID-19 pandemic, smoothed*



*(Four quarters for LGAs, 12 months for regional economic catchment and Queensland).

Source: Jobs and Skills Australia 2023, Small Area Labour Markets (SALM), LGA data tables, June quarter 2023; ABS 2023, Labour Force, Australia, Detailed: Table 16. Labour force status by labour market region (ASGS) and sex, annual averages of the previous 12 months.

The most recent detailed labour force statistics for LGAs reflect data from June 2023. It should be noted that the labour market is continuing to change in response to the changing economy and should continue to be assessed throughout the Pre-Construction Activities and Early Works, Detailed Design and Construction Works stages of the Project.

For June 2023, the unemployment rate in the impact assessment area was 2.3 per cent in Goondiwindi LGA and 4.1 per cent in Toowoomba LGA. This is compared to an average unemployment rate over the past four quarters from June 2022 to June 2023 of 3.6 per cent for Goondiwindi and 4.7 per cent for Toowoomba. The regional economic catchment has an unemployment rate of 2.9 per cent in June 2023, significantly lower than the average 4.3 per cent over the past four quarters, as seen in Table 9 below.

Table 4-2: Summary of labour force characteristics, June 2023, smoothed*

	Labour force	Participation rate**	Unemployed persons	Unemployment rate	12-month unemployment rate average
Goondiwindi LGA	5,725	72.7%	130	2.3%	3.6%
Toowoomba LGA	89,393	62.2%	3,650	4.1%	4.7%
Impact assessment area	95,118	62.8%	3,780	4.0%	4.6%
Darling Downs – Maranoa region[41]	66,785	63.8%	1,968	2.9%	4.3%

[41] Notably, the Darling Downs – Maranoa labour market region does not capture the entire Toowoomba Local Government Area 2020-21 data.

	Labour force	Participation rate**	Unemployed persons	Unemployment rate	12-month unemployment rate average
Queensland	2,810,089	61.6%	107,832	3.7%	3.9%

Source: Jobs and Skills Australia 2023, Small Area Labour Markets (SALM), LGA data tables, June 2023; ABS 2023, Labour Force, Australia, Detailed: Table 16. Labour force status by labour market region (ASGS) and sex, annual averages of the previous 12 months;
*(Four quarters for LGAs, 12 months for regional economic catchment and Queensland)
**Participation rate for working age population 15+ based on 2021 labour force and age data.*

For the June 2023 quarter, the labour force participation rate across the impact assessment area (62.8 per cent) was higher than the Queensland labour force participation rate (61.6 per cent). This higher participation is more concentrated in Goondiwindi (72.7 per cent) than in Toowoomba (62.2 per cent).

Railway construction labour availability

Despite high demand for specialist construction workers over the last five years, railway track construction wage costs as a share of revenue have fallen to account for 23.3 per cent of railway track construction industry revenue in 2022-23. In comparison, wages in the broader construction industry account for only 18.6 per cent of revenue. Industry employment in the railway track construction industry has more than doubled over the last five years reflecting new competitors in the market attracted to major rail projects. [42, 43]

Record levels of activity are expected over the next two years (2023-24) in the railway track construction industry, off the back of landmark rail projects in most capital cities (e.g. Melbourne Metro, Sydney Metro, Canberra Metro, and Cross River Rail). While industry performance is expected to be high, a staged approach to project completion means the industry will experience substantial revenue volatility. Demand for railway construction labour is expected to be high over this time. [44, 45]

Indigenous labour force

According to the 2021 Census, the Indigenous population is inadequately represented in the impact assessment area's workforce, which is reflected in the high rates of Indigenous unemployment and low labour force participation.

Across the impact assessment area, approximately 12.9 per cent of the Indigenous population is unemployed (12.7 per cent in Toowoomba and 16.4 per cent in Goondiwindi). This has changed significantly since the previous Census (2016), wherein 18.6 per cent of the Indigenous population in the impact assessment area were unemployed (with the highest Indigenous unemployment rate in Toowoomba at 19.0 per cent).

The labour force participation rate for the Indigenous population in the impact assessment area was 65.6 per cent, compared to a total rate of 62.8 per cent.

Youth labour force

As shown in Table 10 below, youth (15 to 24 years) unemployment rates are high across the impact assessment area and regional economic catchment, more than double the total unemployment rate. In Toowoomba, the youth unemployment rate is more than double the total unemployment rate (10.3 per cent compared to a total unemployment rate of 4.1 per cent). In Darling Downs – Maranoa, the youth unemployment rate is 8.4 per cent, compared to a total unemployment rate of 2.9 per cent. However, compared to the previous Census (2016), youth unemployment rates in the region are lower. In 2016, the impact assessment area recorded a youth unemployment rate of 14.6 per cent, which has reduced to 10.2 per cent in 2021.

[42] Kelly, A. (2023, June). IBISWorld *Australia Industry (ANZSIC) Report E: Construction in Australia.*
[43] Kelly, A. (2023, June). IBISWorld *Australia Specialized Industry Report OD5135: Railway Track Construction in Australia.*
[44] Kelly, A. (2023, June). IBISWorld *Australia Industry (ANZSIC) Report E: Construction in Australia.*
[45] Kelly, A. (2023, June). IBISWorld *Australia Specialized Industry Report OD5135: Railway Track Construction in Australia.*

Table 4-3: Youth labour force

	Youth Labour Market (2021)			Total Labour Market (2023)		
	Unemployment rate	**Unemployed persons**	**Participation rate**	**Unemployment rate**	**Unemployed persons**	**Participation rate***
Goondiwindi	7.1%	52	68.0%	2.3%	130	72.7%
Toowoomba	10.3%	1539	68.1%	4.1%	3650	62.2%
Impact assessment area	10.2%	1591	68.1%	4.0%	3780	62.8%
Darling Downs – Maranoa region	8.4%	767	65.7%	2.9%	1968	63.8%

Source: ABS 2021, 2021 Census - Counting Persons, Place of Usual Residence (MB), LGA & SA4 (UR) by AGE5P - Age in Five Year Groups by LGA & SA (UR) by LFSP Labour Force Status; Small Area Labour Market (2023) Smoothed Labour Force, Smoothed Unemployment, Smoothed Unemployment Rate.

**2021 Participation rate for working age population 15+ based on 2021 labour force and age data.*

Youth labour force participation rates are similar in Toowoomba and Goondiwindi (68.1 per cent and 68.0 per cent), compared to 65.7 per cent in the Darling – Downs Maranoa region. Lower levels of labour force participation indicate that a high proportion of young people are either not able to work or are not actively looking for work (for example students, or those who are voluntarily inactive). Across the impact assessment area, approximately two-thirds of young persons who are not in the labour force are studying full time (71.1 per cent across the impact assessment area, with 71.6 per cent in Toowoomba and 59.3 per cent in Goondiwindi). This indicates that locally, there is limited capacity in the youth labour force, who may have the skills to be engaged in the Project. Local workforce participation programs may be required to support youth employment.

Household income

The distribution of the population by total household income level in the impact assessment area and regional economic catchment are compared in Table 11 below. As a measure of socio-economic disadvantage, household income levels reflect relative disadvantage across the impact assessment area and regional economic catchment compared to the State average. As outlined in the table, a higher proportion of households across the impact assessment area and regional economic catchment earn less than $500 per week compared to Queensland.

As see in Table 11 below, the median weekly household income across the impact assessment area and regional economic catchment is lower than the State average ($1,402). Median weekly household income is highest in Toowoomba and Goondiwindi at $1,461 and $1,394 per week respectively, and lowest across the Darling Downs – Maranoa region at $1,280 per week.

Table 4-4: Distribution of population by weekly household income, 2021

Area	Weekly income			Median Income
	< $500	$500 - $1,249	= or > $1,250	
Goondiwindi LGA	13.7%	34.6%	48.8%	$1,394
Toowoomba LGA	12.2%	35.2%	52.7%	$1,461
Darling Downs – Maranoa region	14.6%	37.0%	46.1%	$1,280
Queensland	10.9%	31.4%	57.3%	$1,675

Source: ABS 2021 Census of Population and Housing.
Note: This excludes all the following responses: negative, partial, and incomplete income declaration.

4.2.2 Business and industry

Place of work for industry of employment

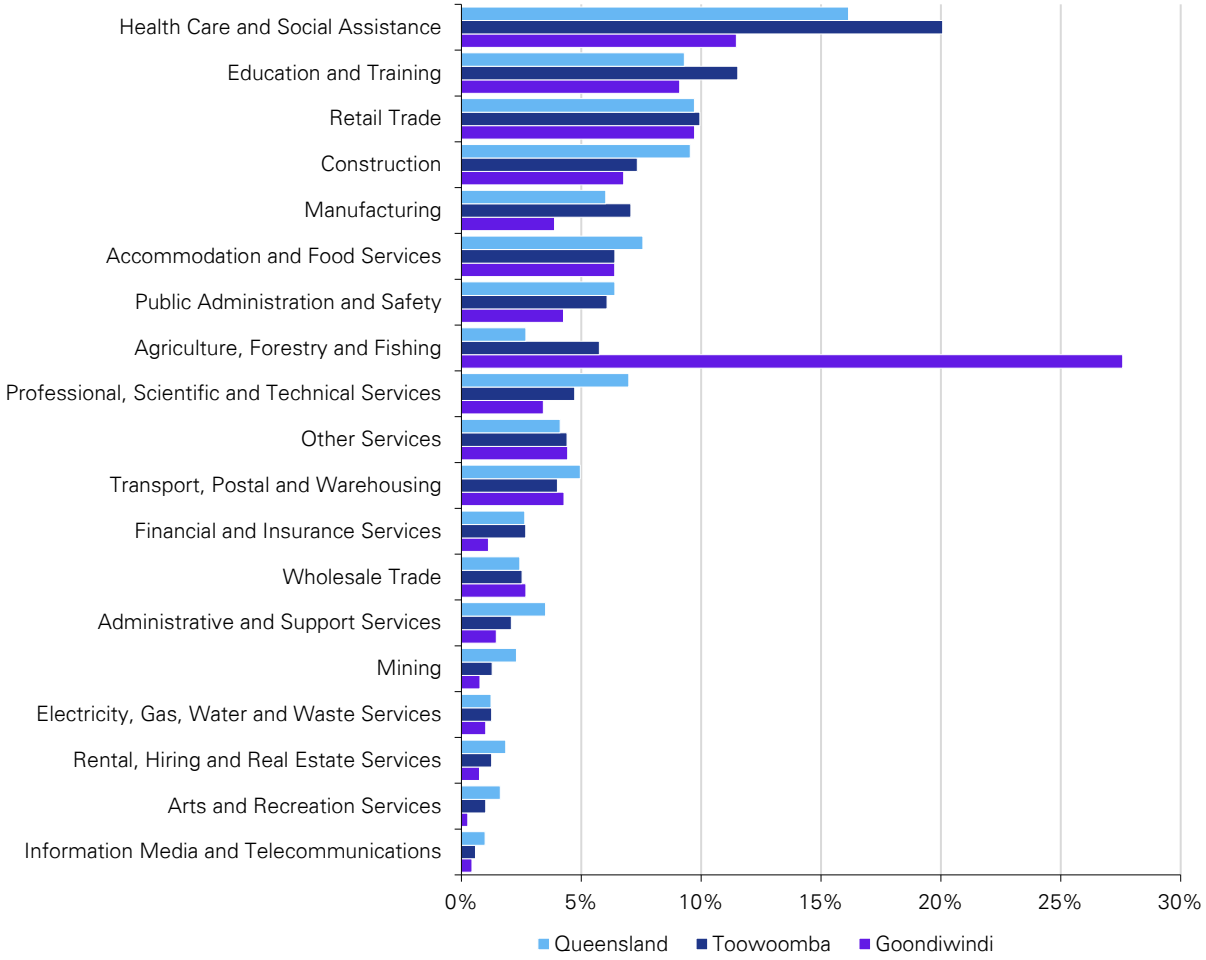
Place of work for industry of employment is used to analyse the sectoral distribution of jobs located within the impact assessment area. It captures all jobs located within the area that are filled by local residents and those who travel to the area for employment.

The impact assessment area is a place of work for approximately 79,479[46] persons (who live both within and outside the catchment area) which broadly reflects the number of jobs located within the impact assessment area. Industry by employment[47] in the impact assessment area is shown in Figure 5.

[46] Notably, the place of work number excludes all data classified as inadequately stated, not stated or not applicable.

[47] Industry by employment is used to analyse the sectoral distribution of jobs located within a defined geographic area. It captures all jobs located within an area which may be occupied by residents or workers who travel to the area for employment.

Figure 5: Industry by employment, impact assessment area, 2021, by place of work



Source: ABS 2021, Census of Population and Housing (excluding not applicable)

Consistent with the impact assessment area's employment by industry, the sectoral distribution of jobs differs between Goondiwindi and Toowoomba.

Within Goondiwindi, Agriculture, Forestry and Fishing is the largest industry of employment, accounting for nearly one-third of all jobs in the area (1,251 jobs). Within this industry, most workers are employed in the Sheep, Beef Cattle and Grain Farming sector (806 persons) which is reflected in the local business and industry profile below (Section 4.2.6).

The strength of the impact assessment area's agricultural sector highlights the importance of supply chain efficiency in supporting the area's economy. There are opportunities offered by the Project to improve the productivity of the local industry by reducing the distance between dispersed agricultural activities to processing facilities and markets. These impacts are outlined in the economic benefits assessment (Section 5.4).

The distribution of employment across industries in Toowoomba is more diverse. The highest proportion of jobs is in service-based industries such as Health Care and Social Assistance (20.1 per cent), Education and Training (11.5 per cent) and Retail Trade (9.9 per cent). These sectors are important in meeting the demand for local services from the local population.

While the Agriculture, Forestry and Fishing industry only represents 5.8 per cent of jobs in Toowoomba, the industry supports approximately 4,314 jobs, predominately in Sheep, Beef Cattle and Grain Farming.

4.2.3 Agriculture industry

The Darling Downs – Maranoa region is one of Queensland's most fertile and productive agricultural areas, positioned on the western slopes of the Great Dividing Range and traversing the Condamine River catchment. The most common land use in the region is grazing modified pastures. Dry land and irrigated cropping, timber production and intensive horticulture and animal production are also common production activities in the region.[48] Accordingly, the agriculture industry offers significant export opportunities for the region, particularly for agricultural and livestock products.

In 2020-21, the gross value of agricultural production in the Darling Downs – Maranoa region was $3.59 billion, representing 24.7 per cent of the total gross value of agricultural production in Queensland ($14.6 billion). The region's agricultural sector is diverse, with the most valuable agricultural commodities being crops ($1.7 billion) and livestock slaughtered and other disposals ($1.6 billion).[49]

The Darling Downs – Maranoa region contains one-quarter of all farm businesses in Queensland (4,413 recorded farms). The highest proportion of businesses are in beef cattle farming (49.3 per cent), followed by grain growing establishments (13.7 per cent).[50]

At a local level, the total value of agricultural production in Goondiwindi is approximately $533.1 million. By value of production, crops represent over half of the major agricultural commodities produced in the region (63.9 per cent).[51] The combination of biophysical attributes exhibited in this area (including slope and water-holding capacity) enables this region to support large areas of broad acre cropping, comprised mainly of cotton.[52] The cotton industry in Goondiwindi is worth over $350 million.[53]

The Toowoomba region produces a wide range of agricultural products, including eggs, beef, horticultural products, grain, dairy products, and cotton. The total value of agricultural production in the region in 2020-21 was $1.1 billion. In 2019-20, agricultural exports from the region were valued at $757 million, and comprised 55 per cent of the region's total agricultural output, highlighting the region's strong export focus. Accordingly, the Toowoomba region is well placed to leverage its strengths in agriculture and benefit from exporting its products to interstate and overseas markets.[54]

Across the impact assessment area, the largest proportion of businesses is in the Agriculture, Forestry and Fishing industries. This reflects the area's land use and inland location, with 889 businesses in Goondiwindi (45.7 per cent) and 3,532 businesses in Toowoomba (21.0 per cent) operating in this industry sector.[55]

Livestock operations and stock routes

As identified in EIS Chapter 8: Land Use and Tenure, a number of current intensive livestock operations are traversed by, or immediately adjacent to the Project:

- Aqualark Pty Ltd , Yarranbrook Whetstone - Cattle Feedlot;
- D M Fletcher, Bringalily - Cattle Feedlot;
- Russel Sydney & Kim Maree Stevens, Millwood – Cattle Feedlot;
- Cameron Pastoral Co. Pty Ltd., Yandilla – Piggery;
- Smithfield Service Pty Ltd (Sapphire feedlot) - Cattle Feedlot;
- F J and F E Verdon - Cattle Feedlot;

[48] ABARES, About My Region – Darling Downs – Maranoa Queensland, 2018-19.
[49] ABS Value of Agricultural Commodities Produced, Australia, 2020-21.
[50] ABARES, About My Region – Darling Downs – Maranoa Queensland, 2018-19.
[51] ABS, Value of Agricultural Commodities Produced, Australia, 2020-21.
[52] EIS Chapter 8 Land Use and Tenure.
[53] Goondiwindi Regional Council, *Rural Production*, 2019.
[54] Toowoomba Regional Council, *Agriculture Profile*, 2020. Most current data as at the time of drafting this EIA.
[55] ABS Counts of Australian Businesses, including Entries and Exits, Jun 2018 to Jun 2022, cat. no. 8165.0.

- Fiona Elder and Simmon Booth- Cattle Feedlot (400 m to the east of the Project footprint);
- Boondooma Country Pork Pty Ltd – Piggery (250 m to the east of the Project footprint);
- Doug Hall Poultry Pty Ltd – Poultry farm (1 km east of the of the Project footprint).

The Project footprint interfaces with stock routes at 12 locations. As described in EIS Chapter 5: Project Description, the State stock route area networks are primarily used by the pastoral industry as:

- An alternative to transporting stock by rail or road
- Pasture for emergency agistment
- Long-term grazing

4.2.4 Tourism industry

Tourism is a significant industry for the regional economic catchment. Southern Queensland Country is recognised as a popular tourist destination for visitors seeking to explore rural landscapes and attractions.

According to Tourism Research Australia, the four-year average (2016-2019) of total tourism expenditure in the Southern Queensland Country tourism region[56] was $1,380 million, which has been increasing, on average, over the past decade. The region received an average of over 6.2 million visitors, comprised of approximately 2.2 million domestic overnight visitors and 56,000 international visitors, with the remaining 4.0 million being domestic day visitors, as shown in Table 12 below.[57]

Table 4-5: Tourism visitation and expenditure, four-year average 2016-2019[58]

Four-year average 2016-2019	Domestic Overnight Visitors		International Overnight		Domestic Daytrip	
Area	**Visitors**	**Expenditure**	**Visitors**	**Expenditure**	**Visitors**	**Expenditure**
Goondiwindi	198,000	$58 m	3,000	$3 m	151,000	$40 m
Toowoomba	928,000	$352 m	28,000	$44 m	2,109,000	$289 m
Southern Queensland Country	2,195,000	$810 m	56,000	$93 m	4,014,000	$477 m

Source: Tourism Research Australia, *LGA and Tourism Region Data Profiles*, 2019

At a local level, Toowoomba received three million visitors annually on average between 2016 and 2019, the majority of which were domestic day visitors (2.1 million). The remainder were international visitors (28,000) and domestic overnight visitors (928,000). Expenditure by these visitors totalled $685 million, including local spending at the region's 1,651 recorded tourism businesses.[59]

Goondiwindi received 352,000 visitors annually on average between 2016 and 2019, the majority of which were domestic overnight visitors (198,000). The remainder were international visitors (3,000) and domestic overnight visitors (151,000). Expenditure by these visitors totalled $101 million in 2019, through participation with 138 recorded tourism businesses. A high proportion of visitors travel through the area on driving holidays.

[56] The Darling Downs – Maranoa tourism region was renamed to Southern Queensland Country in 2018.
[57] Tourism Research Australia, National and International Visitor Survey, 2018.
[58] 2016-2019 LGA Tourism data is the latest freely available for LGA-level data.
[59] Tourism Research Australia, *Local Government Area Profiles*, 2019.

Southern Queensland Country, along with other tourism regions, visitors and expenditure figures declined sharply in 2020 due to the impact of COVID-19 on the economy and travel patterns. Domestic travel restrictions and international border restrictions limited the number of visitors to the region with visitor numbers decreasing by 16.2 per cent (2018-19 to 2020-21) (see Table 13). Similarly, visitor expenditure decreased by 13.2 per cent from 2018-19 to 2020-21. Tourism has increased since the peak of the decline caused by the COVID-19 pandemic, although not to pre-pandemic levels.

Table 4-6: South Queensland Country 2019 vs 2021 – visitors and expenditure

	2018-19		2020-21	
Area	**Visitors**	**Expenditure**	**Visitors**	**Expenditure**
Southern Queensland Country	4,144,000	$474 m	3,474,180	$411 m

Source: Tourism Research Australia, National Visitor Survey tourism results June 2021 and June 2019 – Table 16

4.2.5 Mineral resource and petroleum interests

There are four mineral or coal resource authorities and four applications for mineral or coal resource authorities within the Project footprint, as well as one mineral or resource authority within the impact assessment area for the Project.

The exploration permits include one for coal and one for minerals other than coal near Canning Creek, and three applications for geothermal permits near Yelarbon (lodged in May 2022), and between Southbrook and Gowrie (lodged in August 2022).

One mineral development licence (MDL) for coal near Bringalily and Domville. MDL 299 expired in December 2022 but a renewal has been lodged. A second mineral development licence (MDL 301) in the same vicinity expired in July 2022; however was granted an extension until July 2024.

The mining lease permit ML 50151 and mining lease application (ML 700072) are associated with Commodore open cut mine near Clontarf and Domville. The mining lease (ML 700072) application was lodged in December 2021 and facilitates the proposed expansion of the mine through the conversion of MDL 301 and MDL 299.

There are two petroleum licenses within the Project footprint. These licenses are associated with the Moonie to Brisbane pipeline (PPL 1) at Southbrook and the Roma to Brisbane Pipeline (PPL 2) at Kingsthorpe.

4.2.6 Local businesses

Construction

There are a number of construction businesses located within the impact assessment area, with a total of 1,334 employing businesses (86 in Goondiwindi and 1,248 in Toowoomba) and a further 1,559 non-employing businesses across the area. These businesses are likely to be a significant source of services and equipment during the Project's Construction Works. The supply of labour from these local businesses may be limited with only three businesses in Goondiwindi and 33 businesses in Toowoomba employing more than 20 persons.[60]

As detailed in the Social Impact Assessment (Appendix X), seven nearby quarries have been identified with the potential to supply the Project, including:

- Inglewood Quarry
- Captains Mountain Quarry

[60] ABS, Counts of Australian Businesses, including Entries and Exits, July 2018 – June 2022, cat. no. 8165.0.

- Bland Quarries, Pittsworth
- Quarry Road Quarry
- Toowoomba Quarry
- Wellcamp Downs Quarry
- Toowoomba Wellcamp Quarry

The Project will also require material sourced from borrow pits. Six potential borrow pit locations between Goondiwindi and Millmerran along the Project alignment have been identified as possible sources of structural fill.

All borrow pit locations are within the Darling Downs Regional Planning Area, with four borrow pit located within the Goondiwindi regional Council jurisdiction and two borrow pits located within Toowoomba Regional Council jurisdiction (see EIS Appendix AD: Borrow Pits Preliminary Environmental Assessment).

Transport

While transport is not a significant industry within the impact assessment area, there are several large transport companies based in the impact assessment area and regional economic catchment, which may have the capacity to support the construction of the Project, including:

- Marshall Group, operating a number of aluminium trailers including B Doubles and Road Trains to haul grain into feedlots in SEQ;
- Frasers Livestock Transport, operating livestock transportation with more than 150 trailers of all configurations; and
- Woods Transport has a large fleet of vehicles travelling between Goondiwindi, Toowoomba, and the Port of Brisbane.

Toowoomba Enterprise Hub

The Toowoomba Enterprise Hub is located south-east of the Project, encompassing an internationally capable airport and a freight facility with more than 2,000 ha of industrial land on the western outskirts of Toowoomba.

The Toowoomba Enterprise Hub is comprised of:[61]

- **Toowoomba Wellcamp Airport:** Located approximately 15.5 km west of Toowoomba central business district, Wellcamp Airport supports interstate, intrastate and international connections for the Darling Downs, Granite Belt, Surat Basin and Southern Downs regions. Wellcamp Airport is a passenger and freight airport.
- **Wellcamp Business Park**: An airport-centred precinct with aviation, logistics, transport, corporate and mining services focus. The Park is located approximately 17 km west of the Toowoomba central business district, and north of the Toowoomba Wellcamp Airport.
- **The Witmack Industry Park:** An industrial precinct offering large industrial land parcels, located close to transport infrastructure including Warrego Highway, the Toowoomba Bypass and Inland Rail.
- **The Charlton Logistics Park**: An industrial precinct for transport and logistics operators, located on the Warrego Highway with easy access to the Toowoomba Bypass.
- **InterlinkSQ:** A proposed major intermodal (rail and road) freight and logistics centre, north of the Warrego Highway. InterlinkSQ includes an Inland Port, Intermodal Terminal, and port rail shuttle.

[61] Toowoomba Enterprise Hub, 2019, www.toowoombaenterprisehub.com.au

5 Economic impacts

5.1 Inland Rail Program impacts

This EIA has focused on the specific economic impacts resulting from the construction and operation of the Project. However, the assessment acknowledges the role of the Project, and the remaining project sections, in collectively delivering the benefits of Inland Rail. In its entirety, the Inland Rail Program will enhance Australia's existing national rail network and serve the interstate freight market. As per the *Inland Rail Programme Business Case (2015),* the anticipated economic impacts of the Inland Rail Program include:

- Lower prices for consumers as a result of lower inter-capital freight transport costs, which reduces the cost of living for households.
- Positive direct net economic benefits, driven by improvements in freight productivity, reliability and availability, and benefits to the community from reduced environmental externalities, reduced road congestion and improved safety benefits. The Inland Rail Program is stated to be economically viable with a benefit-cost ratio of 1.02 at a 7 per cent discount rate (2.62 at a 4 per cent discount rate).
- Economic growth as increased profits (for industries and producers where intercapital freight is an input or output) and incomes are multiplied through the economy. The Inland Rail Program is anticipated to deliver a net positive impact of $16 billion on GDP ($2015) over its 10-year construction period and 50 years of operation.
- Nationally, Inland Rail is also expected to deliver an additional 16,000 jobs at the peak of construction, and an average of 700 additional jobs per annum during operation.
- Enhanced competition between rail and road freight, by providing a credible transport alternative, which will drive further innovation and efficiency.
- Potential to promote the expansion and development of freight precincts around Inland Rail terminals as a result of the benefits from co-location and clustering of industries (as a result of reduced transport costs to warehousing, economies of scale and knowledge-sharing opportunities).

Anticipated supply chain efficiencies

It is anticipated the Inland Rail Program will result in a shift away from alternative modes of transport towards freight rail, offering a more efficient solution for intrastate and interstate freight operators who will be able to avoid inland and coastal road networks and coastal rail networks. By offering increased freight speeds and carrying capacities, the Inland Rail Program offers opportunities to improve the productivity of local export industries such as agriculture, by making rail freight transportation more competitive. For large, heavy loads of products such as grain and cattle, industry will be able to get their product to market more quickly and efficiently. This may encourage additional expansion of these local industries.

Please refer to Section 5.5.1 for more information on supply chain benefits resulting from the Project.

Anticipated value chain efficiencies

The Inland Rail Program will enhance the attractiveness of the corridor as a location for investment in value-add operations including logistics, manufacturing and warehousing. Key examples could include grain storage facilities, cotton handling facilities, and regional airport expansions. The Inland Rail Program will also encourage the formation of supply chain hubs such as intermodal facilities. There are already several intermodal facilities being investigated because of the Inland Rail Program. In Queensland, there are a number of existing intermodal facilities including Acacia Ridge, Bromelton and the Brisbane Multimodal Terminal at Port of Brisbane. Funding has been received through the Queensland Government's Job Fund for a new road and rail intermodal 'InterLinkSEQ' located in Charlton in the Darling Downs region which will promote increased productivity and

jobs growth in the region. A new intermodal facility is also being investigated at Ebenezer as recommended by the Australian Government response to the independent review of Inland Rail.[62]

The construction of ancillary and complementary infrastructure such as intermodal terminals ensures the efficient connectivity of freight between transport modes, allowing better connectivity to ports, regional networks, capital cities, and other locations not reached by the Inland Rail alignment. This critical infrastructure will improve market access and could lead to the expansion of local agricultural businesses and industry, promoting employment and economic growth. These improvements will only be fully realised once investment in the Inland Rail intermodal facilities and other critical supply chain infrastructure is complete.

Refer to Section 5.5.4 for more information on specific value chain opportunities at the Toowoomba Enterprise Hub in Wellcamp.

5.2

5.2 Workforce impacts

5.2.1 Direct employment

The Project will result in a number of direct employment opportunities across the Pre-Construction and Early Works , Construction Works and Operations stages of the Project. These jobs have been estimated based on the indicative construction schedule and component activities. Construction schedules assumed for the purposes of EIS technical assessments have been based on information available at the time of assessment and are subject to change.

Table 16 below provides an overview of the employment needs across the different stages of the Project.

Table 5-1. Employment across different Project stages

Project stage	Description	Workforce needs
Pre-Construction Activities and Early Works	Enabling works will be progressed ahead of EIS approval to inform the ongoing development of design and inputs into the EIS assessment. This work is not captured in the EIA. Enabling works include: • Relocation and/or removal of utilities/ services crossings; • Surveys and geotechnical investigations; • Investigations required to inform the ongoing development of detailed design, such as ground improvement; and • Facilities required to support other enabling works.	• The workforce required for Project construction is estimated to peak at 900 full-time equivalents (FTE) around week 80 of construction. There will be on average 383 personnel deployed across the full construction period. Refer to EIS Chapter 5: Project Description for further information. • The core construction workforce will consist of professional staff, supervisors, trade workers and plant operators, with earthworks crews, bridge structure teams, and capping and trackwork crews working at different periods through the construction stage. • The construction workforce is expected to be drawn from SEQ, the Goondiwindi and Toowoomba LGAs, as well as from within northern NSW in the Moree Plains and Gwydir LGAs. The Toowoomba LGA has the largest proportion of workers employed in the construction industry across the impact assessment area (refer to
Construction Works	Construction activities are undertaken by the Contractor and include: • Site set out and pegging within the Project footprint	

[62] Australian Government (2023, April). *Australian Government Response to the Independent Review of Inland Rail*

	• Establishment of additional laydown areas and compounds, including vehicle inspection/workshops, washdown facilities and temporary fencing as required • Clearing – using dozers, chainsaws, excavators, trucks and similar equipment • Establishment of erosion and sediment controls as per the approved Erosion and Sediment Control Plan • Rail corridor works, including track works turnouts and crossing loops • Road and road-rail interface works • Rail maintenance access roads • Bridge construction • Fencing • Signalling and communications • Laydown, stockpile, and storage areas (that are not Enabling Works) • Ballast – supply, delivery and installation • Concrete sleepers – supply, delivery and installation • Utilities and services to support/service the Project • Bulk earthworks – major cut-to-fill operations include the winning of suitable construction material from sections of cut along the Project alignment or from borrow pits external to the site • Permanent and temporary drainage controls, including culverts and longitudinal drainage • Clean-up, landscaping, site restoration and rehabilitation • The Whetstone MDC	Section 18.3.7). Refer to EIS Chapter 17: Social for further information. • The MDC will require an estimated 55 personnel during the establishment of the facility. In addition, the MDC will require approximately 76 personnel to support its operation over a three-year operational period following construction. Refer to EIS Appendix AE: Whetstone MDC Preliminary Environmental Assessment for further details.
Operations	The railway will operate 24 hours a day, 365 days a year, on a variable schedule. A more detailed description of the workforce that is needed to operate Inland Rail can be found in EIS Chapter 5: Project Description.	

Local employment

Overall, the Project has a significant opportunity to support local employment. At the time of construction, local employment is dependent on a number of factors, including labour market conditions, skills availability, and the existence of workforce training and participation programs to support local, Indigenous and youth employment.

The ability of the local economy to supply labour to the Project depends on the specific location of works along the alignment. At the southern extent of the Project alignment, workers may be drawn from the surrounding local and regional communities, including across the New South Wales State border. At the northern extent,

labour supply is likely to be sourced locally within the Toowoomba region. Along the alignment, labour supply may be sourced from the local or broader economy due to the establishment of the proposed non-resident workforce accommodation facilities near Inglewood and Yelarbon (with a third facility proposed in the Millmerran region).

While the risks of labour shortages are high, the deterioration in the Darling Downs – Maranoa labour market observed in recent statistics indicates opportunities for recruiting, training and re-skilling available workforces in the region to supply a portion of the workforce requirements of the Project. However, in both a national and State context, the Project will be completed in a relatively tight labour market, particularly for specialist skilled jobs, which may impact the ability of the broader workforce to support the delivery of the Project.

ARTC has recently completed a procurement process for the Project's construction contract through ARTC's *Industry Participation Policy* that engages Australian manufacturers, suppliers, and service providers in the delivery of the Inland Rail Program. This process incentivises competitive bidding for local employment and procurement strategies. ARTC has ongoing engagement with its Contractors to set targets and performance measures for local employment and will monitor Contractors' progress towards sustainable employment opportunities.

To optimise local employment, the Project procurement process for the construction contract will incentivise Contractors to maximise local benefits through enabling competitive bidding for local employment and procurement targets. During Construction Works, the proportion of personnel to be drawn from the regional economic catchment will be determined by the Contractor based on the availability of personnel across the range of occupations and trades. The Contractor will be required to report on local employment outcomes and opportunities for training and employment. The Project will underpin its planning with the minimum participation targets set by related Commonwealth and Queensland policies. The Project will drive outcomes towards aspirational or incentivised targets with Contractors to exceed these minimum benchmarks. The Project's contractual negotiations will remain commercial in confidence.

Where policy benchmarks do not exist, a minimum of 15 per cent local employment and 11 per cent female participation targets have been included for the Construction Works stage, with consideration for the baseline labour conditions, likely cumulative demand and competition for roles or supply at the time of Project construction, and input from key stakeholder consultation. More details related to local employment targets can be found in EIS Chapter 17: Social and Appendix X: Social Impact Assessment.

ARTC will continue to engage with local stakeholders including Councils, the Toowoomba Chamber of Commerce, and the Goondiwindi Chamber of Commerce to monitor labour draw. ARTC will implement corrective actions as necessary such as recruitment advertising or specific training strategies aimed at skilled shortages. ARTC has partnered with Goondiwindi Regional Council to facilitate the provision of a Local Employment Roadmap and local employment portal for the Goondiwindi LGA, to increase the awareness of job and lifestyle opportunities in the Goondiwindi LGA, including jobs that will be available through Inland Rail.

ARTC has established the Inland Rail Skills Academy to help create opportunities for education, training, skills development, and employment for communities along the Inland Rail Program alignment. The Inland Rail Skills Academy includes a number of partnerships and programs, including undergraduate scholarships, science, technology, engineering, and maths (STEM) education, training programs, and a partnership between ARTC and the Australasian Railway Association. ARTC is working with Construction Skills Queensland (CSQ) to identify specific skills and labour shortages, to support ARTC's identification of priority areas for consideration as part of the Inland Rail Skills Academy programs.

Refer to Social Impact Assessment (Appendix X) for further information.

Indigenous participation

As identified in the Social Impact Assessment (Appendix X), consultation with *Bigambul Native Title Aboriginal Corporation (BNTAC)*, Western Wakka Wakka people and endorsed Indigenous parties have indicated a strong interest in employment opportunities for Indigenous people and emphasised the need for early engagement with Indigenous communities so that workers can be job ready. The Social Impact Assessment (Appendix X) has

identified actions to support Indigenous employment through the Project.[64] These are discussed below. In addition, the Whetstone MDC construction will offer employment opportunities to Indigenous people supported by specific training partnerships.

ARTC undertook a skills survey with Bigambul young people as part of a September 2019 youth summit. The results indicate a keen interest in working as part of the Project on Country. It was noted that key skills and development needs, including obtaining licences and operators' certificates, and mentoring and peer support, should be provided to help Indigenous youth succeed in employment.

The Inland Rail's tender assessment criteria includes local and first nations participation as a key element of all construction tender assessments. The minimum Indigenous procurement and employment participation targets, in accordance with the *Commonwealth Indigenous Procurement Policy*, are based on three per cent of the Australian-based workforce of the Contractor must be Indigenous Australians, on average over the initial term of the contract. The Project will aspire to a target of four per cent Indigenous employment.

ARTC has developed the *Inland Rail Indigenous Participation Plan* as the foundation of its commitments to Indigenous employment and training opportunities for Indigenous people. In addition, the *Industry Participation Policy* adopted by ARTC is committed to maximising opportunities for Indigenous businesses and adheres to the *Indigenous Procurement Policy*.

ARTC is also engaging with its Contractors to set targets and performance measures for Indigenous employment and will monitor Contractors' progress towards employment targets. Where policy benchmarks do not exist, the minimum Indigenous employment target is 4.0 per cent. In line with local employment strategies, ARTC will be required to report on employment and procurement outcomes monthly that will be shared publicly and address further draft SIMP reporting requirements. In addition, an analysis of construction labour availability will be conducted prior to construction to support further refinement of recruitment and training strategies.

ARTC is also partnering with the Clontarf Foundation through the Inland Rail Skills Academy to provide funding to support the education, training and employment of Indigenous youth in communities along the Inland Rail alignment.

The draft SIMP (specifically the health and community wellbeing sub-plan) specifies that ARTC commits to ongoing engagement with Indigenous communities, families, and Elders to support Indigenous employees, underpinned by a high level of coordination between contributing programs and agencies (see Appendix X: Social Impact Assessment).

Workforce accommodation

The construction workforce is expected to be drawn predominantly from SEQ, with some personnel sourced from nearby communities (including within northern NSW). To mitigate potential impacts on local housing access and short-term accommodation, and due to the distances that personnel would be required to travel from population centres to construction sites, the Project proposes up to three temporary non-resident workforce accommodation facilities. Two of the accommodation facilities included in the revised draft EIS have been proposed to be located in the vicinity of Yelarbon and Inglewood, with the third facility (not addressed in the revised draft EIS) proposed near Millmerran.

While it is likely that the non-resident workforce accommodation facilities would operate concurrently, they would not be fully occupied at the same time, as workers would move between facilities as construction proceeds along the alignment. Each facility will have a capacity to accommodate a minimum of 300 beds, which will be sufficient to collectively meet the peak workforce demand and an average occupancy outside the peak period of approximately 270 people per facility. Based on a range of criteria for assessing the location to establish the non-resident workforce accommodation facilities, the locations for the Yelarbon and Inglewood facilities have been identified:

- Cunningham Highway, Yelarbon (Lot 30 MH721)

[64] The Social Impact Assessment actions have been informed by the ABS 2021 Census Indigenous labour force statistics.

- Millmerran–Inglewood Road, Inglewood (Lot 5 MH75)

The landowners for the two proposed properties have been consulted and both are receptive to having a non-resident workforce accommodation facility being located on their property. The service life of the non-resident workforce accommodation sites will be restricted to the construction time period for the Project. These accommodation sites will have the capacity to accommodate the 76 personnel required to operate the Whetstone MDC. Based on data from the QLUMP, these locations have been contained to rural land used for grazing native vegetation and cropping purposes.

A detailed breakdown of the schedule and activities related to the construction of the two non-resident workforce accommodation sites can be found in EIS Chapter 5: Project Description.

The location for the third Millmerran based non-resident workforce accommodation facility has not been included in the revised draft EIS. The site selection and due diligence associated with locating a Millmerran based non-resident workforce accommodation facility will be undertaken by the Contractor during detailed design.

Project personnel will travel between their homes or temporary non-resident workforce accommodation facilities and worksites using passenger vehicles such as utilities and four-wheel drives. The Contractor will consider the use of buses to transport workers between non-resident workforce accommodation facilities and worksites, depending on the number of personnel at different times and the distribution of crews between worksites. Temporary parking facilities for construction will be located within construction laydown areas, the rail corridor and within non-resident workforce accommodation facilities, with designated areas selected to minimise the potential for noise impacts. The provision of parking in each location will be sufficient to accommodate the number of vehicles associated with the maximum number of workers expected to use each area during peak occupancy. For more information, please see EIS Chapter 5: Project Description.

Changes to property and housing

As described in the Social Impact Assessment (Appendix X), a number of changes to property and housing could occur during construction as a result of the Project, including:

- Potential impacts to property prices due to noise, severance and visual amenity factors associated with the Project;
- Increase in housing demand, in Millmerran, Pittsworth and Goondiwindi, with the potential to inflate rents and displace low-income rental households;
- Impacts on local housing access, in the context of very low rental housing availability; and
- Additional stress on emergency support or housing support services as jobseekers visit local towns seeking Project work.

As identified in the Social Impact Assessment (Appendix X), the implementation of temporary non-resident workforce accommodation facilities minimises the potential for Project personnel's housing demands to impact local housing access and minimises demand for short-term accommodation which could affect tourists' access to the region. The draft SIMP (specifically the housing and accommodation sub-plan) specifies that construction Contractors are to develop a workforce accommodation plan for ARTC approval. This workforce accommodation plan is intended to avoid, minimise, and manage any potential impacts of the Project on property and housing.

Impacts on employment in other industries

Construction activity may draw existing staff or tradespeople away from local businesses or Councils. The Project may also impact the availability of casual workers at harvest time if casual workers in the agricultural industry accept employment in the Project's construction instead. The Social Impact Assessment (Appendix X) states that this may be difficult to overcome with the relatively low level of unemployment in the impact assessment area. However, ARTC's training initiatives are expected to increase workforce skills and capacity, not just for Inland Rail but also for other industries, which may offset this impact. There is also potential for businesses in the Social Impact Assessment impact assessment area to benefit from Project supply opportunities which may also offset any impacts of labour draw.

ARTC's key strategies to reduce labour draw include:

- Delivering training to increase the pool of skilled workers
- Orienting local businesses to Project opportunities and supporting business capacity building to enable businesses to upskill and/or build their workforces
- Monitoring of labour draws in cooperation with key stakeholders such as local councils and implements corrective action as required.

For more information refer to Appendix X: Social Impact Assessment.

5.2.2 Indirect employment

The industrial and consumption effects of the Project will result in the creation of indirect jobs, both due to upstream and downstream linkages between the Project's activities and the rest of the economy, such as the stimulation of businesses further up the supply chain (e.g. manufacturers and suppliers of industry inputs), and the stimulation of activities downstream (e.g. through the provision of inputs to other sectors and the expenditure patterns of employees). The regional economic impact modelling results (Section 5.4) indicate that indirect employment during the Project's construction will be generated in the Professional, Scientific and Technical Services and Wholesale Trade sectors, reflecting the importance of these two sectors in the construction sector's supply chain.

5.3 Economic benefits assessment

5.3.1 Introduction

An economic benefits assessment has been undertaken to identify and assess the likely benefits of the Project, as a discrete project, to the community.[65] This analysis assesses only those impacts that would be likely if freight operators were to respond to the completion of the individual project. These economic benefits have been estimated based on the impacts of the Project on the transport network, in particular freight operators, along with the benefits accrued by non-users (the community).[66] Where the Project improves the transport connectivity and efficiency between freight originators and destinations, these movements across road and rail have been assessed in the appraisal. Economic benefits associated with increased efficiency in the construction and delivery of the Project, such as establishing the MDC in Whetstone to support Project construction, are not captured in this analysis.

5.3.2 Methodology

The approach below reflects the three-step benefit assessment modelling process adopted for the purposes of the EIS:

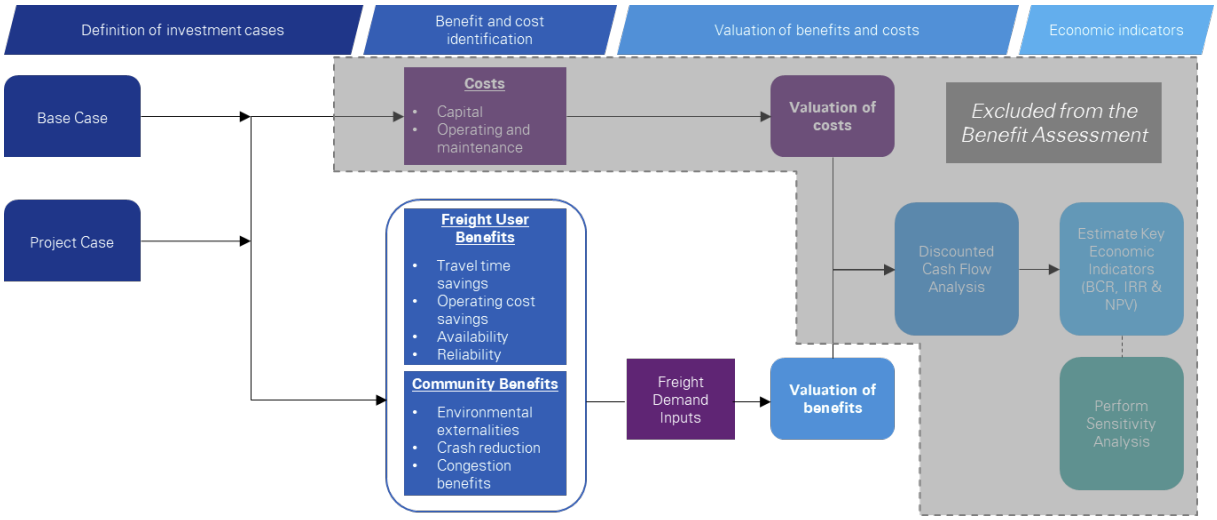
1. **Define base and investment cases**: a clear articulation of the problem, investigation and definition of Base Case and Project Case options, and future demand drivers;
2. **Identify benefits**: identification of relevant economic, social and environmental benefits associated impact groups that can be measured for the Project; and
3. **Monetise benefits**: quantification, monetisation, and assessment of benefits over the Project appraisal period.

[65] The economic benefits assessment has been undertaken prior to the refinements made to the construction phase of Inland Rail. The impact of this refinement would have a minor effect on the economic benefits identified, however it explains any inconsistencies between the construction phase identified in the economic analysis and those identified within the body of this EIA.

[66] The benefits associated with the entire Inland Rail Program are well established and are presented in the Inland Rail Program Business Case (2015).

Figure 6 below outlines a typical CBA approach and its application to the assessment of the Project.

Figure 6: CBA approach and the economic benefits assessment



Critically, the key difference between the complete CBA approach and the economic benefits assessment approach adopted in this analysis is the exclusion of costs. Consequently, the estimation of economic indicators is not applicable to this analysis; rather, the discounted present values of the benefits are the focus of the assessment.

5.3.3 Base Case and Project Case

The benefits assessment measures the incremental benefits derived by the Project, by defining two network performance scenarios:

- The **Base Case** adopted for this benefits assessment is a 'do nothing' scenario, where it is assumed that no other sections of Inland Rail are progressed, and freight continues to be moved via either coastal rail or the road network.

- The **Project Case** adopted for this benefits assessment is the Project. The economic benefits estimated as part of the analysis assess only those impacts that would be likely if freight operators were to respond to the completion of this individual Project.

Key assumptions and parameters adopted for use in the benefits assessment are presented in Table 17.

Table 5-2: Economic benefits assessment assumptions

Parameter	Value	Source
Discount rate	A 7% real discount rate is used for the Project Case with sensitivity tests conducted at 4% and 10%	*Infrastructure Australia Business Case Assessment Template 2016*
Price year	2022	
Discount reference year	2022	
Appraisal period	50 years from 2028. The first year of measured benefits is 2028 (i.e. the first full year of benefits)[67]	*Australian Transport Assessment and Planning (ATAP) Guidelines* (Category 4, Section 2.4)

[67] While noting the operational life of the Project is 100 years, the benefits assessment has been conducted for a 50-year appraisal period in line with best practice methodologies, as specified in the ATAP Guidelines.

Parameter	Value	Source
Temporal treatment of benefits and costs	Demand model outputs for 2024, 2054 and 2074 were used as the basis for analysis. Linear interpolation has been undertaken to estimate benefits between these years. Benefits beyond 2074 have been held constant.	*Inland Rail Programme Business Case (2015)* and KPMG analysis
Indexation	Unit costs and parameter values are indexed to the price year by the appropriate price indices	*Australian Bureau of Statistics*
Annualisation	Demand projections are presented in annual terms	*Inland Rail Programme Business Case (2015)*

5.3.4 Freight demand

Demand inputs to the benefit assessment have been sourced from the freight demand projections developed by ACIL Allen for the *Inland Rail Programme Business Case (2015)*. The assumptions underpinning these demand projections are documented in Chapter 7 of the *Inland Rail Programme Business Case (2015)*. This section outlines how these demand projections have been adopted for the Project EIS.

The demand projections developed by ACIL Allen are presented in terms of 66 different origin-destination (OD) pairs for both the Base Case and Project Case. These OD pairs span the entire Inland Rail Program length and as discussed above, many represent freight movements that would not be impacted if the Project were to be constructed independently of the overarching Inland Rail Program.

To enable an incremental economic benefits assessment to be undertaken for the Project, selected OD pairs were chosen which represent freight movements that would benefit from the improved rail connectivity associated specifically with the Project. The selected OD pairs, which originate both within and south of the New South Wales Border-Gowrie area and flow through to Brisbane, consist of:

- North Star- Brisbane
- Narrabri Cotton to Brisbane
- North Moree- Brisbane
- Goondiwindi Cotton to Brisbane
- South Queensland / North New South Wales to Brisbane Port Cottonseed
- South Queensland / North New South Wales to Brisbane Port Grain on existing narrow gauge

The transport network (road and rail) impacted by these freight movements represents the impact assessment area for the purposes of the economic benefits assessment.

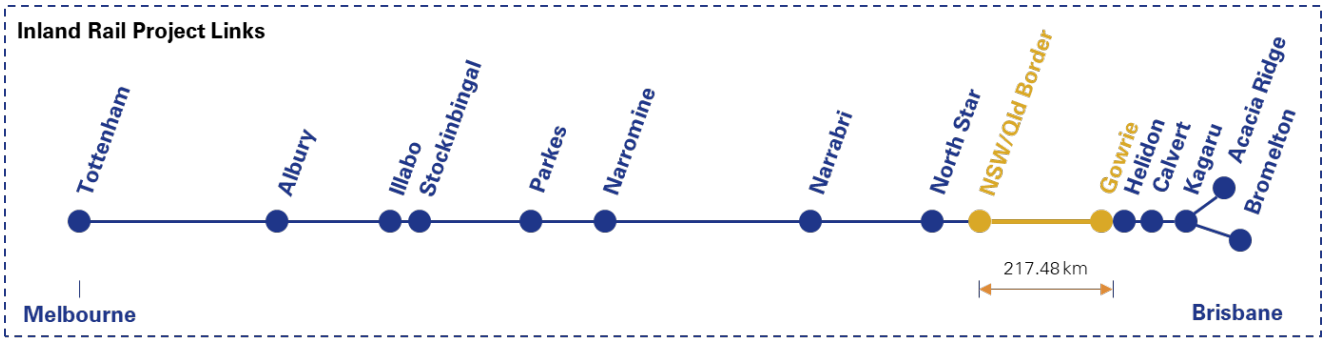
As the projected travel time (both in terms of net tonne hours and hours travelled) for these OD pairs is dependent on downstream upgrades, the benefits associated with these freight movements have been apportioned. The factor used to scale these benefits is the ratio of the length of track upgrades that forms the Project, and the total length of proposed track upgrades from the New South Wales border to the program extent at Acacia Ridge (e.g. 217.48 km / 399 km).[68]

Notably, some road freight movements are not presented in terms of OD pairs and instead are presented by commodity (e.g. 'agriculture'). To account for these general freight movements, the proportion of freight movement associated with the Project has been estimated using the ratio of the length of track upgrades that

[68]The track length used in the economic benefits assessment is based off revised reference design for the Project.

forms the Project, and the total length of track upgrades as part of Inland Rail (e.g. 217.48 km / 1,740.6 km). Figure 7 provides an overview of the Inland Rail Program.

Figure 7: Inland Rail Program – Project extents



Source: ARTC

Note: the figure is not to scale, used for illustrative purposes only.

For the economic benefit assessments contained within the Inland Rail EIS, freight movements from coal demand have been excluded. This is based on the CBA results for the scenario "No Western Line Upgrade" (see *Inland Rail Programme Business Case (2015)* Chapter 9. Economic Analysis), where coal benefits are equal to zero. Subsequently, in the absence of the Western Line upgrade to the existing Queensland Rail network, no benefits are expected to accrue to coal movements as a result of the delivery of Inland Rail. These results imply that, under this scenario, there is no net benefit to coal trips traversing any of the new sections to be delivered as part of Inland Rail.

Furthermore, the results of the *Inland Rail Programme Business Case (2015)* CBA highlight that the identified benefits accruing to coal trips are a direct result of Inland Rail with complementary investment in Western Line Upgrades, which do not form part of the scope of Inland Rail as it stands currently and are not funded. For a more detailed note on the treatment of coal in the EIS, please refer to Appendix D of this document.

5.3.5 Benefit categories

The economic benefits assessment considers a range of benefit types, which have been categorised into two broad benefit streams:

- **Freight benefits**: these benefits include the changes in the cost to freight operators by switching mode from road to rail; and
- **Community benefits**: these benefits include the changes in costs to the community resulting from a reduction in delays on the road network and other externalities such as crash reductions and reduced environmental impacts.

A description of each of the benefits included in the assessment is provided in Table 18 below.

Table 5-3: Benefit category descriptions

Benefit Category	Description
Freight Benefits	
Travel time cost savings	Freight travel time cost savings represent the value to the economy associated with freight arriving at its destination more efficiently as a result of improvements to the rail network that enable shorter distances, faster travel and, subsequently, increased capacity. Where freight demand is induced (either diverted from road to rail or new generated freight travel) as a result of improvements to the rail network, the 'rule of half' has been used to estimate the benefits to the new rail freight. Notably, there is no induced freight demand assumed for the Project.
Operating cost savings	Operating cost savings represent the reduction in costs associated with fuel, crew, maintenance and depreciation to both road and rail freight operators as a result of operators making use of the Project. Many of the benefits in this category are derived from the savings associated with shifting freight from road onto rail which has lower operating costs per net tonne-km.
Improved service availability	Improved service availability represents the increased flexibility in arrival and departure times afforded to the rail freight network as a result of the Project. This is due to fewer restrictions on freight service times provided by the increased network capacity. Freight service availability benefits have been estimated based on the values presented in the *Inland Rail Programme Business Case (2015)*. These benefits were derived by ARTC in 2015 and have been apportioned to individual projects for the purposes of this incremental benefits assessment. The values calculated by ARTC have been escalated to a 2022 price year using the producer price index (PPI) Rail Freight Transport (A2314067L).
Improved service reliability	Improved service reliability represents the certainty in transit time and subsequent economic efficiency gains to freight operators. This provides reduced wait times at points of loading/unloading along the network, allowing goods to reach their destinations in a timelier manner. As with availability benefits, reliability benefits have been estimated based on the values presented in the *Inland Rail Programme Business Case (2015)*. These benefits were derived by ARTC in 2015 and have been apportioned to individual projects for the purposes of this incremental benefits assessment. The values calculated by ARTC have been escalated to a 2022 price year using PPI Rail Freight Transport.
Community Benefits	
Crash reduction	Crash cost savings represent the reduced costs associated with fatal and serious injuries resulting from both road and rail incidents.

Benefit Category	Description
Environmental externalities	Reduced environmental externality costs represent reductions in air pollution and greenhouse gas emissions due to the Project. Many of these benefits can be attributed to the mode shift from road freight to rail freight.
Road decongestion benefits	As the Project encourages greater movement of freight by rail, the reduced truck movements that are projected upon completion of the Project result in reduced congestion in urban areas.

Freight Benefits

The freight benefits have been quantified and monetised using demand assumptions from the *Inland Rail Programme Business Case (2015)* and the parameters set out in Table 19.

Value of freight per tonne hour unit rates have been derived from the previous analysis completed for the *Inland Rail Programme Business Case (2015)* and escalated to current year prices using appropriate producer price indices.

The analysis estimated a range of rail operating costs for both the Base Case and Project Case. The rates provided in the table below demonstrate the efficiency improvements gained in rail operations through the completion of the Project, with higher capacity trains and improved transit times resulting in lower rail operating parameters (unit rates drop from $0.044 – $0.036 per net tonne km (NTK) in the Base Case down to $0.019 – $0.018 NTK in the Project Case for agricultural freight. These parameters have been estimated based on the outputs from the *Inland Rail Programme Business Case (2015)* and *Transport for New South Wales Economic Parameter Values (2020)*.

The freight service improvements utilise the previous analysis completed for the *Inland Rail Programme Business Case (2015)* and have been escalated to current year prices and apportioned to the Project.

Table 5-4: Freight benefit parameter values ($2022)

Parameter Value	Variable/s	Source/s
Freight Travel Time		
Value of Freight (Rail)	$1.79 tonne hour	ATAP, *Inland Rail Programme Business Case (2015)*, PPI Rail Freight Transport (A2314067L)
Value of Freight (Road)	$1.52 tonne hour	ATAP, *Inland Rail Programme Business Case (2015)*, PPI Road Freight Transport (A2314058K)
Operating Cost		
Rail Operating Cost – Base Case	2024: 0.044 $/ntk 2054: 0.036 $/ntk 2074: 0.042 $/ntk	TfNSW (2018), *Inland Rail Programme Business Case (2015)*, PPI Rail Freight Transport (A2314067L)
Rail Operating Cost – Project Case	2024: 0.018 $/ntk 2054: 0.018 $/ntk 2074: 0.019 $/ntk	TfNSW (2018), *Inland Rail Programme Business Case (2015)*, PPI Rail Freight Transport (A2314067L)

Parameter Value	Variable/s	Source/s
Road Operating Costs	0.064 $/ntk	ATAP, *Inland Rail Programme Business Case (2015)*, PPI Road Freight Transport (A2314058K)
Road Driver Costs	32.52 $/h	Austroads, *Inland Rail Programme Business Case (2015)*, consumer price index (CPI)
Freight Service[69]		
Freight Service Availability (annual estimates)	2024: $17.74 m 2054: $193.48 m 2074: $316.91 m	*Inland Rail Programme Business Case (2015)*, PPI Rail Freight Transport (A2314067L)
Freight Service Reliability (annual estimates)	2024: $11.83 m 2054: $48.03 m 2074: $85.86 m	*Inland Rail Programme Business Case (2015)*, PPI Rail Freight Transport (A2314067L)

The total freight demand for the Project consists of agricultural freight travelling from northern New South Wales (including North Star, Narrabri and North Moree) and southern Queensland (including Goondiwindi) regions through to Brisbane. As within the *Inland Rail Programme Business Case (2015)*, induced freight demand has only been modelled for the entire extent of Inland Rail (e.g. Melbourne to Brisbane and Brisbane to Melbourne); as such, no induced demand has been included in the analysis for the Project.[70]

Consistent with the assumption contained within the *Inland Rail Programme Business Case (2015)*, the resulting freight demand from the Project is expected to see all future contestable freight carried by rail. Under these demand projections, freight users will benefit from a significant reduction in average travel times by rail in the Project Case (from 8.80 hours in the Base Case to 5.83 hours in the Project Case in 2054). This results in the shift of the total freight task from road freight to rail freight – the total tonnes carried is the same between the Base Case and the Project Case. As a result of the shift to rail freight and longer average trip distances, the total NTK travelled increases in the Project Case (in 2054 the Base Case 1,250 mNTK increases to 1,261 mNTK in the Project Case). Freight benefits have been estimated using the appropriate change in freight demand (such as mNTK) by mode type by the relevant parameter unit. The estimated freight benefits for the Project are provided over a 50-year analysis period, as shown in Table 20 below. Overall, the Project's freight benefits represent an incremental $539.91 million in present value terms over the Base Case.

Table 5-5: Estimated freight benefits ($2022)

Benefit	Undiscounted	Present Value (7%)
Freight Time Savings	$212.31 m	$33.96 m
Operating Cost Savings	$1,904.30 m	$320.07 m
Freight Service Availability	$1,200.26 m	$144.86 m
Freight Service Reliability	$321.85 m	$41.03 m

[69] For the freight service benefits, interpolation has been applied using years 2024, 2054, and 2074. These values are then apportioned based on the approach described in Section 5.3.4 - Freight demand.

[70] No new independent demand modelling has been undertaken to validate the assumptions contained within the Inland Rail Program Business Case (2015).

Benefit	Undiscounted	Present Value (7%)
TOTAL	**$3,638.73 m**	**$539.91 m**

Operating cost savings represent 59 per cent of freight benefits with $320.07 million in present value terms as freight shifts from road to rail. This is representative of the significant efficiency benefits gained from lower transit times (the average rail freight journey time in 2054 drops from 8.80 hours in the Base Case to 5.83 hours in the Project Case) and higher capacity freight trains. In addition, each rail trip in the Project Case is expected to remove the equivalent of 46 road freight trips from the impact assessment area in 2054.

Freight service availability and reliability represent a combined $185.89 million in present value terms to freight benefits (approximately 34 per cent). This is apportioned to the Project based on the combined service improvements from the broader Inland Rail Program and represents the expected benefit from improved freight service within the Project area.

Freight time savings provide the remaining $33.96 million in present value terms to freight benefits (approximately 6 per cent). As with operating cost savings, this is largely representative of the combined efficiency improvements and the resulting mode shift of road freight trips to rail freight trips.

Community Benefits

The community benefits have been quantified and monetised using demand assumptions from the *Inland Rail Programme Business Case (2015)* and the parameters set out in Table 21.

The avoided crash cost saving per net tonne-km has been adapted from the Bureau of Transport Economics (BTE) estimates. The parameters are consistent with typical transport appraisal methodologies used in business cases throughout Australia. The values presented in the table below have been escalated by CPI.

The environmental externalities cost saving per km travelled parameters have been adapted from Austroad's Guide to Project Evaluation Part 4 Section 5 (2012) and are consistent with the parameters applied within the *Inland Rail Programme Business Case (2015)*. The values presented in the table below have been escalated by CPI.

The marginal cost of congestion per vehicle km travelled parameters have been adapted from Transport for New South Wales Principles and *Guidelines for Economic Appraisal of Transport Investment and Initiatives*. This is consistent with the approach applied within the *Inland Rail Programme Business Case (2015)*. The value presented in the table below has been escalated using PPI for Road Freight Transport.

Table 5-6: Community benefit parameter values ($2022)

Parameter Value	Variable/s	Source/s
Crash Cost Savings		
Road	0.0058 $/ntk	BTE (1999), CPI
Rail	0.0005 $/ntk	BTE (1999), CPI
Environmental Externalities		
Road (Urban)	41.12 $/1000 km	Part 4 Section 5 Guide to Project Evaluation Austroads (2012), *Inland Rail Programme Business Case (2015)*, CPI
Road (Rural)	13.61 $/1000 km	Part 4 Section 5 Guide to Project Evaluation Austroads (2012), *Inland Rail Programme Business Case (2015)*, CPI

Parameter Value	Variable/s	Source/s
Rail (Urban)	6.68 $/1000 km	Part 4 Section 5 Guide to Project Evaluation Austroads (2012), *Inland Rail Programme Business Case (2015)*, CPI
Rail (Rural)	1.78 $/1000 km	Part 4 Section 5 Guide to Project Evaluation Austroads (2012), *Inland Rail Programme Business Case (2015)*, CPI
Road Decongestion Benefits		
Marginal congestion cost	3.05 $/vkt	TfNSW, *Inland Rail Programme Business Case (2015)*, CPI

The shift of road freight to rail freight provides a significant reduction in freight demand by kilometres travelled. This frees up capacity on the road network and reduces the level of interaction between heavy vehicles and cars. Subsequently, businesses and community members can move more freely through the local network. Community benefits have been estimated using the appropriate change in freight demand (such as kilometres travelled) by mode type by the relevant parameter unit. The estimated community benefits for the Project are provided over a 50-year analysis period as shown in Table 22 below. Overall, the Project's community benefits represent an incremental $163.35 million in present value terms over the Base Case.

Table 5-7: Estimated community benefits ($2022)

Benefit	Undiscounted	Present Value (7%)
Crash Cost Savings	$132.08 m	$22.32 m
Environmental Externalities	$384.08 m	$65.53 m
Road Decongestion Benefits	$446.76 m	$75.49 m
TOTAL	**$962.92 m**	**$163.35 m**

Crash cost savings represent approximately 14 per cent of community benefits ($22.32 million in present value terms) as freight traffic is removed from the road network.

The reduction in heavy freight traffic within the impact assessment area will provide further cost savings from environmental externalities, such as air pollution, greenhouse gas emissions, noise, and other environmental disruptions. The avoided environmental externality costs resulting from the Project have been estimated to provide $65.53 million in benefits to the community (approximately 40 per cent of community benefits).

Road decongestion benefits provided the greatest share of community benefits (approximately 46 per cent), with an estimated $75.49 million in present value terms. Relative to the Base Case, the Project Case is expected to remove all road freight traffic from the area allowing other commuters to travel more freely across the road network.

5.3.6 Economic benefits assessment results

The results of the economic benefits assessment estimate that the Project is expected to provide a total ($2022 present value terms) of $703.26 million in incremental benefits to the impact assessment area (at a 7 per cent discount rate). This consists of $539.91 million in freight benefits and $163.35 million in community benefits.

Observing the composition of benefits, the largest share of benefits for the Project is freight operating cost savings, representing approximately 46 per cent of the total benefits (at a 7 per cent discount rate). Freight

benefits more broadly (including freight time travel savings, operating cost savings, as well as improved reliability and availability) represent approximately 77 per cent of the total projected benefits for the Project.

Reductions in environmental externalities (i.e. air pollution and greenhouse gas emissions) from reduced heavy vehicle km travelled represents approximately 9 per cent of the total benefits (at the 7 per cent discount rate).

The full results of the economic benefits assessment are presented in Table 23 below.

Table 5-8: Results of the economic benefits assessment, present value terms ($2022)

Benefits	Discount Rate		
	4%	7%	10%
Freight Benefits	**$1,081.25 m**	**$539.91 m**	**$311.35 m**
Travel Time Savings	*$66.02 m*	*$33.96 m*	*$19.98 m*
Operating Cost Savings	*$606.86 m*	*$320.07 m*	*$192.98 m*
Improved Availability	*$320.31 m*	*$144.86 m*	*$76.09 m*
Improved Reliability	*$88.06 m*	*$41.03 m*	*$22.30 m*
Community Benefits	**$309.52 m**	**$163.35 m**	**$98.42 m**
Crash Reduction	*$42.25 m*	*$22.32 m*	*$13.47 m*
Environmental Externalities	*$124.37 m*	*$65.53 m*	*$39.39 m*
Road Decongestion Benefits	*$142.90 m*	*$75.49 m*	*$45.56 m*
TOTAL BENEFITS	**$1,390.77 m**	**$703.26 m**	**$409.77 m**

Source: KPMG

Cost Benefit Analysis: Inland Rail Programme Business Case

As detailed above, due to the nature of the incremental assessment approach adopted for this EIS, a project-specific CBA to assess the costs and benefits of the Project in isolation has not been undertaken. Findings from conducting a project-specific CBA will not capture the full impact that is expected to be delivered upon completion of Inland Rail. Instead, the results of the economic analysis undertaken for the *Inland Rail Programme Business Case (2015)* are provided to illustrate the anticipated net economic impact of Inland Rail on the community as a whole.

The results of this analysis, as presented in the *Inland Rail Programme Business Case (2015)*, are provided in Table 24 below.

Table 5-9: Economic appraisal results for Inland Rail ($2015)

	Net Present Value	Benefit Cost Ratio
Present Value at a 4% Discount Rate	$13,928 m	2.62
Present Value at a 7% Discount Rate	$116.1 m	1.02

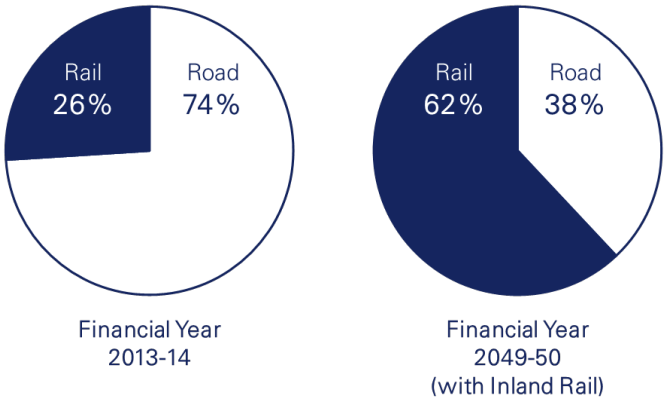
Source: Inland Rail Programme Business Case 2015

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

Demand assessment estimates from the *Inland Rail Programme Business Case 2015* indicated that the Inland Rail Program could attract an approximate two million tonnes of agricultural freight from road to rail, particularly grain and cotton from New England and grain from the Darling Downs. Detailed information related to freight transition can be found in the Key Findings of the *2015 Inland Rail Programme Business Case* and the Potential Opportunities for the Southern NSW Region outlined in the *2020 Inland Rail Regional Opportunities Report*.

Figure 8 provides an illustration of the changing market share of Melbourne to Brisbane intercapital freight from the 2013-14 financial year to the 2049-50 financial year with Inland Rail that is outlined in the *2015 Inland Rail Programme Business Case*.

Figure 8. Market share of Melbourne to Brisbane intercapital freight



Source: *Inland Rail Programme Business Case (2015)*

5.4 Regional economic impact analysis

A regional impact analysis has been undertaken to highlight the impacts of the Project on the regional, State, and national economies using KPMG-SD, a CGE model developed and maintained by KPMG. KPMG-SD is used to simulate the direct and indirect (or flow-on) impacts of the Project on the broader economy.

As described in Section 2.1, the regional economy is represented by the Darling Downs – Maranoa labour market region.

5.4.1 Key considerations

The direct and indirect economic impacts of the Project during the Construction Works stage are modelled using a version of KPMG's regional CGE model (KPMG-SD) configured to provide two snapshots of the structure and size of the economy for the Project:

- The first snapshot is the **baseline** representation of the economy. For the Construction Works stage, the baseline is a representation of the size and structure of the economy in the absence of the CAPEX costs associated with the development of the Project.
- The second snapshot is a **revised** representation of the economy that includes the impacts of the Project. For the Construction Works stage, this revised snapshot is a representation of the economy during the period when the CAPEX costs associated with the development of the Project are executed.

The key modelling assumptions and inputs that underpin the regional economic assessment results are provided in Appendix B of this document. This representation of the economy in the model is contemporary and considers the most likely labour market conditions to prevail during project construction. It reflects the impacts of COVID-19 and current market conditions and incorporates labour market impacts related to pandemic-related stimulus projects.

5.4.2 Limitations

It is important to note that the results of the CGE modelling are subject to the following limitations:

Construction Works stage

CAPEX costs associated with the development and construction of the Project are modelled as a transitory expenditure shock to the economy in the context of KPMG's projection of the most likely labour market scenario. If there is a significant overlap in the timing of the Construction Works stages of the other sections in Inland Rail, modelling each segment in isolation may result in an underestimation of the pressures on resource availability, particularly labour. This could also be exacerbated by other construction projects in the surrounding region. In recognition of this possibility, a cumulative impact analysis has been conducted where the Construction Works stages of all Inland Rail projects located in Queensland and two Inland Rail projects located in northern New South Wales (see Section 5.6.2) are modelled jointly. The Project CAPEX excludes the required investment for establishing the MDC in Wheatstone.[71] Construction schedules assumed for the purposes of EIS technical assessments have been based on information available at the time of assessment and are subject to change.

Operations stage

Due to the nature of the Inland Rail Program, the operational economic impacts of the Project will only be fully realised once all components of Inland Rail are completed. Assessing each segment of Inland Rail individually and in isolation from the whole Program will not capture all the benefits expected to be generated upon completion of the entire Melbourne to Brisbane connection. Accordingly, modelling the long-term benefits generated by the Project in isolation from other components of Inland Rail is unlikely to be informative.

In the context of the regional impact analysis, when modelling each segment of Inland Rail in isolation, the CAPEX costs are disproportionate to the benefits directly attributable to that particular segment. If the Project segment was built but no other segment was completed, the benefits would be insufficient to justify the investment. From a modelling perspective, it would appear as if there had been a significant overinvestment in rail infrastructure. That is, the supply of rail services is greater than the demand for these services. This excess supply of rail services can be eliminated by a combination of reducing the price of rail service (to stimulate demand), writing off the investment and subsidising the rail operations. Each of these mechanisms has a distortionary impact on the economy. These distortions are an artefact of the requirement to consider the benefits of the Project in isolation rather than as a reflection of what will happen in the economy. For this reason, the Operations stage modelling results are not included in this EIA.

5.4.3 Regional economic impact analysis results

The headline impacts of the Project on the Darling Downs – Maranoa region during the Construction Works stage are summarised in Table 25 below.

Table 5-10: Summary of the direct and indirect economic impacts of the Project on the Darling Downs – Maranoa region over the Construction Works stage

	Additional Real Gross Regional Product ($2021-22)	Additional Direct and Indirect Jobs (Persons, annual average)
Darling Downs – Maranoa	$410 m	332
Rest of Queensland	$143 m	107
Rest of Australia	$26 m	-93

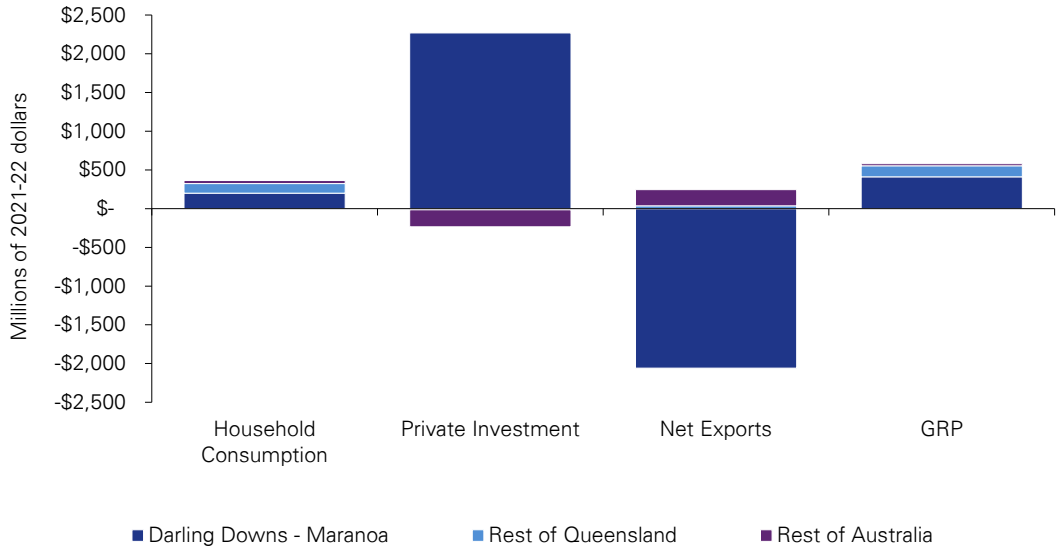
Source: KPMG

[71] The economic modelling was done at a point in time prior to the inclusion of the MDC in the EIS process. To obtain consistency in estimating the cumulative impacts across the Queensland , the additional $36.5 million CAPEX has been excluded from the modelling analysis. The minor update to CAPEX will not materially impact the results.

During the Construction Works stage, real GRP is projected to be $410 million higher than the baseline level for the Darling Downs – Maranoa region, $143 million for the remainder of Queensland, and $26 million for the remainder of Australia. It is estimated that, over the Construction Works stage, an additional 332 direct and indirect jobs will be generated on average each year for Darling Downs – Maranoa and 107 jobs for the rest of Queensland. To put this into context, an approximate average of 383 FTEs has been planned across the Project's Construction Works stage . The displacement of some economic activity in other Australian states is expected to result in total employment being lower than in the baseline by 93 jobs.

Figure 9 summarises the macroeconomic results for the Darling Downs – Maranoa region in the context of the rest of the Queensland and Australian economies. The simulation results indicate that the economic impacts of the Project during the Construction Works stage are concentrated in the Darling Downs – Maranoa region. Net exports, which include inter-regional and international exports and imports, are negatively impacted. The resources required to complete the construction of the Project are expected to be sourced locally and from interstate and overseas suppliers. At the local level, higher costs induce the cost-sensitive trade-exposed sectors to release resources to accommodate the investment demands of the Project.[72] Where it is profitable to do so, businesses switch some of their productive capacity towards accommodating the demands associated with the Project and away from sales to other customers (e.g. to interstate and overseas customers).

Figure 9: Macroeconomic results: Construction Works stage



Source: KPMG

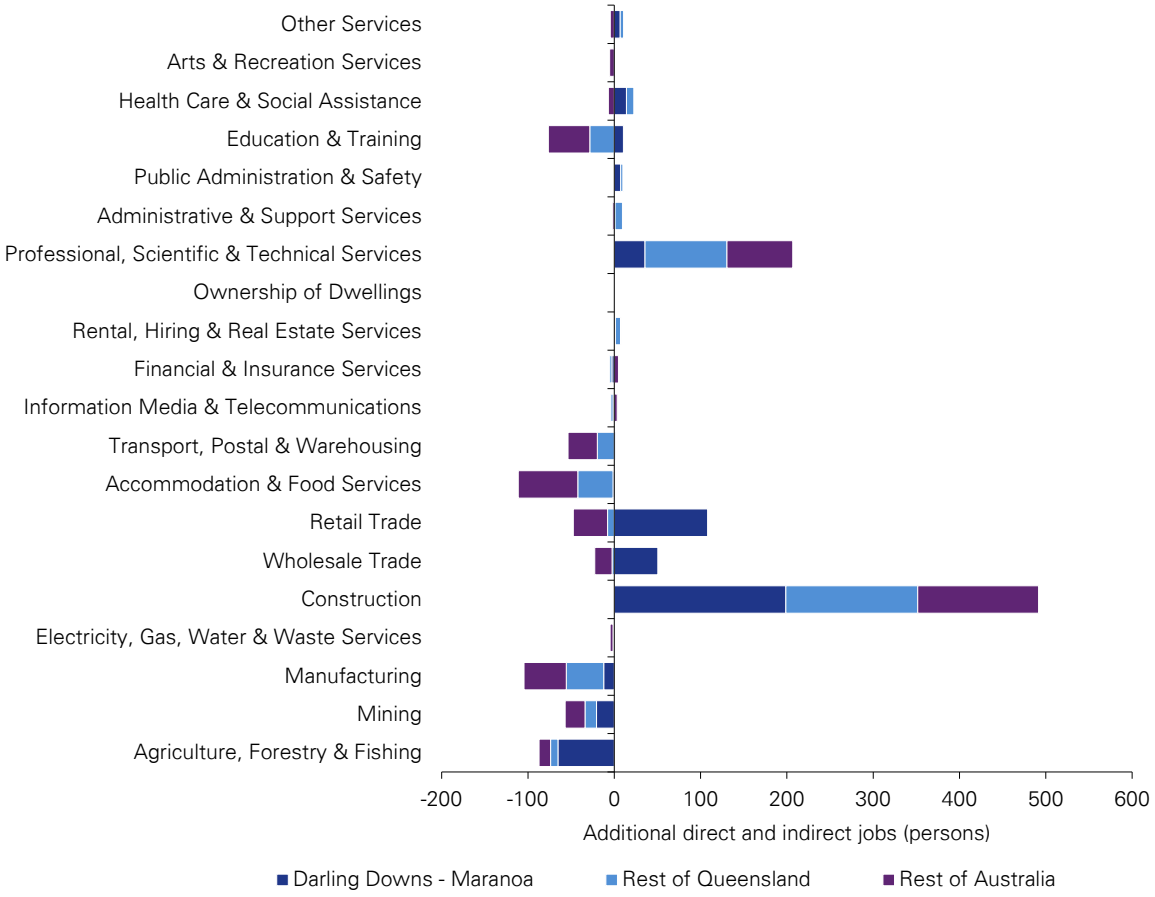
Employment results at the industry level, reflecting the movement of workers between industries and regions, are presented in Figure 10 and Figure 11 below. The increase in the demand for workers can be accommodated by drawing from the ranks of the unemployed (or under-employed) and displacing workers from existing jobs. With tightness anticipated in the labour markets during the Construction Works stage, the benefits from increased labour demand are primarily in the form of higher real wages resulting in the movement of workers from one job to another. Increasing the demand for workers in a tight labour market scenario generates

[72] The CAPEX costs associated with the Project constitutes a temporary expenditure shock to the economy. Some of the goods and services purchased by customers in the Darling Downs – Maranoa region are imported from interstate and overseas. CAPEX costs, particularly at the regional level, are more import-intensive than other types of expenditure. This means that a CAPEX cost shock will, other things being equal, result in net exports contracting. In addition, KPMG have assumed that businesses do not respond to the temporary shock by increasing their productive capacity through investment in fixed capital. Instead, businesses use more labour with their existing fixed assets (e.g. plant and equipment), which increases costs and reduces competitiveness. The macroeconomic results reported are roughly linear for small deviations in the assumed CAPEX costs. For example, if the Project CAPEX costs were increased by 5 per cent, then net exports for Darling Downs – Maranoa would fall by a further 5 per cent.

economic benefits through higher real wages to workers, which then leads to higher household consumption and living standards. ARTC's strategies to reduce labour draw are discussed in Section 5.2 of this EIA.

The *Construction* sector, which benefits directly from the Project's CAPEX costs, is anticipated to expand employment the most. The results also indicate the expansion of employment in the *Professional, Scientific and Technical Services* and *Wholesale Trade* sectors. This reflects the importance of these two sectors in the *Construction sector's* supply chain. The increase in demand for resources to complete the construction of the Project tends to increase resource costs. This has negative impacts on traditional cost-sensitive, trade-exposed sectors, such as *Agriculture, Forestry and Fishing*, *Mining*, and *Manufacturing* and on non-traditional trade-exposed sectors, such as *Accommodation and Food Services* and *Education and Training*. As a result, these sectors contract and release resources to construction-related sectors.

Figure 10: Industry employment results: Construction Works stage



Source: KPMG

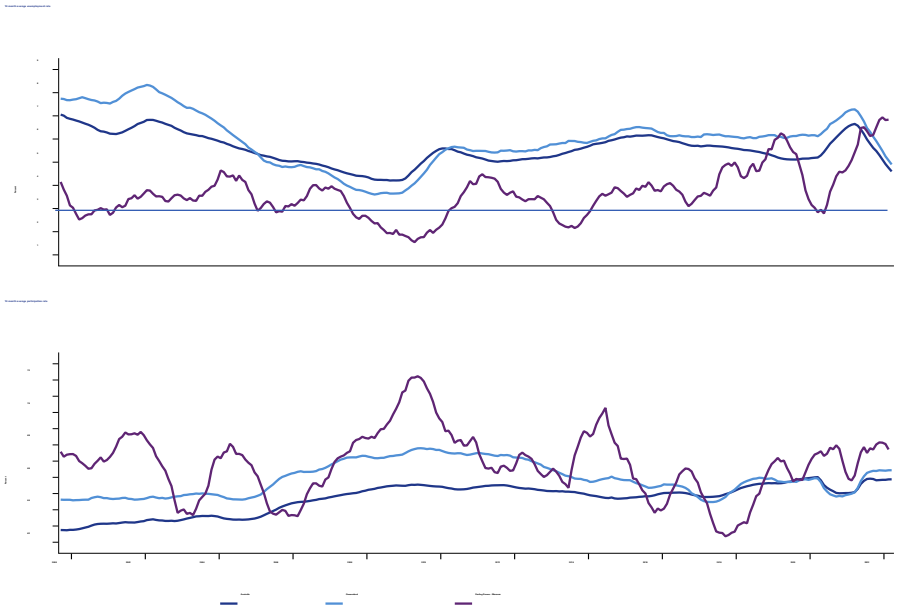
5.4.4 Labour market conditions and impacts of tightness on regional economic benefits

Recent labour market statistics can be used to inform workforce capacity and capability within the local region. Labour market conditions in Darling Downs – Maranoa appear to have deteriorated since mid-2020 with the average annual unemployment rate rising from 2.8 per cent in May 2020 to 6.6 per cent in May 2022, well above the national and State levels of 4.4 per cent and 4.7 per cent respectively.[73] In contrast, the 12-month average

[73] ABS, *Labour Force Survey*, cat. no. 6291.0.55.001. Released June 2022.

participation rate has remained above national and State levels since late 2019 and was 67.2 per cent in May 2022.[74] An upward trend in unemployment rates, coupled with sustained strength in labour supply as evidenced by high participation rates compared to national and State levels, suggests a degree of capacity in Darling Downs – Maranoa's labour market. The ABS has identified that the labour force data for Darling Downs – Maranoa may be statistically unreliable; therefore, it is important to consider labour market conditions in the broader State and national context. At the national level, the current (June 2022) unemployment rate is low, not seen since 1974, and the participation rate is high, at record levels. As seen in Figure 11, the unemployment rate in Queensland is also at historically low levels and the participation rate is close to a record high.

Figure 11: Labour market conditions in Darling Downs - Maranoa, Queensland, and Australia



Source: KPMG, ABS, Macrobond

If labour market conditions at the national and State levels remain in the recent range, the Project's Construction Works stage will be completed in the context of a relatively tight labour market, especially in the market for skilled labour relevant to the construction sector. There is a significant amount of infrastructure work in the pipeline, which is in addition to the work yet to be undertaken across other sectors, such as non-residential building construction, that compete for similar labour resources. According to Infrastructure Australia, there are currently 634 projects across transport, utilities, and building infrastructure. A total of 434 projects, or approximately two-thirds of these major public infrastructure pipeline projects, are scheduled to be completed in the next three years to 2025.[75] The eastern states of New South Wales, Queensland, and Victoria will account for 87 per cent of major public project activity, with many of the upcoming projects involving infrastructure in energy and transport.[76]

Recent *Labour Force Survey* results indicate that, at the national level, the number of unemployed workers reporting that their last job was in Construction has declined by 61.9 per cent from its peak of 65,900 in November 2020 to 25,100 in May 2022.[77] Similarly, in Queensland, in May 2022, the number of unemployed workers whose last job was in Construction dropped to 5,900, just over one-third of the level seen in November 2020.[78] The job vacancy statistics also showed an increase in labour demand for the Construction workforce as

[74] Ibid.

[75] Infrastructure Australia (2021a). Infrastructure market capacity report, https://www.infrastructureaustralia.gov.au/publications/2021-infrastructure-market-capacity-report

[76] Ibid.

[77] Based on ABS, Labour Force Survey, Quarterly, cat no. 6291.0.55.001. Released June 2022.

[78] Ibid.

the ABS job vacancies in the Construction sector has continued to rise, up by 33.4 per cent over the year to May 2022.[79]

KPMG's central forecasts outline that economic growth will peak towards the end of 2022 and then ease back to a more moderate pace over the next few years. The unemployment rate is expected to pick up gradually over the next few years but remains at levels that are modest by historical standards. The key risk to KPMG's central case forecasts is that inflation, which is assumed to peak at around 7 per cent towards the end of 2022, is higher than we expect, in part due to labour market tightness. If this risk was to materialise, the Central Bank would need to raise interest rates more aggressively in a bid to bring inflation back within its target range and this policy response would slow the economy more sharply than KPMG's central forecasts and increase the chance of the economy falling into recession.

Therefore, while the risks of labour shortages are high under KPMG's central case, labour market conditions could deteriorate rapidly over the next year if inflation in Australia and overseas necessitates Central Banks to aggressively increase interest rates. Noting the data limitations identified by the ABS, recent statistics suggest that there is a deterioration in the Darling Downs – Maranoa labour market, which provides opportunities for recruiting, training, and re-skilling available workforces in the region to supply a significant portion of the workforce requirements of the Project. The Project schedule may also be optimised to minimise market impact. The best estimates of prevailing trends in the Darling Downs – Maranoa labour market, and the ability of construction workers to mobilise to Project locations, suggest that the risks of labour market disruption can be reduced. It is important to recognise that labour market disruption is not necessarily a negative for the economy. As discussed in section 5.4.3, increasing the demand for workers in a tight labour market scenario generates economic benefits through higher real wages to workers, which then leads to higher household consumption and living standards.

It is noted that there may be benefits from having additional infrastructure projects in the adjacent and surrounding areas around the same time as the Project. These benefits come in the form of lowered mobilisation costs and the ability to transfer labour experience and skills between projects, particularly those constructed in the period leading up to, and the period following the Project's Construction Works stage.

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

5.5 Business and industry impacts

The following business and industry impacts have been identified through local consultation and analysis of local businesses undertaken by ARTC.

5.5.1 Agriculture industry

The construction and operation of the Project have the potential to impact high-value farming operations and general agricultural uses across the impact assessment area. These potential impacts include:

- Loss of agricultural land;
- Acquisition of land used for livestock operations;
- Disruption to access and infrastructure;
- Disruption to stock and product movement;
- Hydrology and periodic inundation;
- Improvements in supply chain efficiency; and

[79] Based on ABS Job Vacancies, cat no. 6354.0. Released 31 March 2022.

- Noise.

These impacts may change the value of agricultural production in the region, due to changes in accessibility, connectivity and/or productivity. Consultation with landholders is ongoing to further determine potential impacts. Details on consultation undertaken for the Project are included within the Appendix E: Consultation Report.

Loss of agricultural land

As detailed in the EIS Chapter 8: Land Use and Tenure, the Project will result in the sterilisation of productive agricultural land within the permanent disturbance footprint. Productive land that is mapped within the existing South Western System and Millmerran Branch Line rail corridors has been previously sterilised and has therefore been excluded from the information set out below. The Agricultural Land Class approach classifies a particular agricultural area based on land and soil information and is used for land audit purposes. The approach comprises a four-tier hierarchy ranging from Class A (arable land) through to Class D (land that is unsuitable for agriculture). Class A land is suitable for a wide range of current and potential crops with few limitations to production. Class B land is suitable for a narrow range of current and potential crops but is highly suitable for pastures. Important Agricultural Land (IAA) is a separate category used in agricultural land auditing and is defined as land that is strategically significant to the region or the State.[80]

The scale of the total loss (within the permanent disturbance footprint) of productive agricultural land is anticipated to be low. A total of 1,600 ha of land within the permanent disturbance footprint (outside of existing rail and road corridors) that is classified as Class A (1,526 ha) or Class B (74 ha) agricultural land will be sterilised. These areas are primarily used for grazing and cropping, as well as some irrigated cropping and irrigated perennial horticulture uses. In addition, approximately 1,438 ha of land classified as IAA is within the permanent disturbance footprint.

Within the temporary footprint, there is approximately 597 ha of land classified as Class A agricultural land and 8 ha of Class B agricultural land, equating to a total of 605 ha of land that will be temporarily used during the Construction Works stage of the Project. These areas are primarily used for grazing activities. Approximately 390 ha of land within the temporary footprint is also within an IAA.

At a local government level, within Goondiwindi, the permanent disturbance footprint traverses 245 ha of Class A land (0.02 per cent) 6 ha of Class B land (0.19 per cent), and 140 ha of Border Region IAA land (0.01 per cent). Within Toowoomba, the permanent disturbance footprint traverses 1,281 ha of Class A land (0.17 per cent), 68 ha of Class B land (0.22 per cent) and 1,299 ha of Eastern Darling Downs IAA land (0.19 per cent).[81]

Table 5-11: Impacted agricultural land

Land classification	Goondiwindi LGA Area of land (ha)	Toowoomba LGA Area of land (ha)	Total Area of land (ha)
Permanent footprint			
Class A	245	1281	1,526
Class B	6	68	74
Border Region IAA	140	0	140
Eastern Darling Downs IAA	0	1299	1,299
Temporary footprint			
Class A	311	286	597
Class B	1	7	8
Border Region IAA	101	0	101
Eastern Darling Downs IAA	0	289	289

[80] Department of Agriculture and Fisheries, Agricultural Land Classes, 2010-2019.

[81] EIS Chapter 8: Land Use and Tenure.

Overall, the permanent disturbance footprint will traverse 0.07 per cent of the impact assessment area's productive agricultural land. This proportion can be used to estimate, at a high level, the potential loss of agricultural production resulting from the Project. In 2020-21, the gross value of agricultural production in Goondiwindi and Toowoomba LGAs was $1.62 billion.[82] Accordingly, it is estimated that the Project could result in a loss of $1.20 million (value foregone) in gross agricultural production per year.[83]

The permanent disturbance footprint will directly impact approximately 495 Lots and 33 Easements. The temporary footprint will directly impact approximately 499 Lots and 33 Easements The permanent and temporary disturbance footprints are based on the revised reference design and the preliminary construction methodology and subject to change during detailed design. Additional land may also be acquired where necessary or by agreement with affected owners.

The permanent disturbance footprint consists of the following tenure types: Easements; Freehold Lots; Land Act Lease; State Forest; Reserve; and State Land. Further discussion on the types and number of land tenures impacted is provided in Chapter 8: Land Use and Tenure.

Based on the *Queensland Collaborative Land Use and Management Program* (QCLUMP), the predominant land use for the majority of the impacted properties includes (but is not limited to):

- Production from relatively natural environments
- Production from dryland agriculture and plantation
- Conservation and natural environments
- Intensive uses
- Production from irrigated agriculture and plantations

While the permanent disturbance footprint reflects the land acquired to accommodate permanent infrastructure components of the Project (e.g. road, earthworks, rail maintenance access roads, drainage), properties acquired temporarily are affected during Project construction to support a range of construction related activities (e.g. laydown areas, non-resident workforce accommodation facilities, Whetstone MDC). Temporary disturbance to existing agricultural land will not result in a permanent loss of productive land. Any landscape and visual impacts will be isolated within the Construction Works stage of the Project. The temporarily acquired properties during construction will result in financial benefit from their use in accordance with the *Acquisition of Land Act 1967* (Queensland) or subject to agreement with the landowner. Following construction, land used during construction will be rehabilitated in accordance with the *Rehabilitation and Landscaping Management Sub-plan* in addition to location- and property-specific reinstatement commitments.

The temporary Whetstone MDC will be constructed on low-intensity agricultural land, approximately 18 km south-west of Inglewood and 59 km east of Goondiwindi in the Goondiwindi Regional Council local government area. These land parcels are used predominantly for agricultural purposes, including irrigated cropping and cattle

[82] Australian Bureau of Statistics, 2021, *Value of Agricultural Commodities Produced, Australia, 2020-21*.

[83] This value was estimated by calculating a proportion of the productive agricultural land impacted (productive land area disturbed within the Project footprint divided by total productive land in the Toowoomba and Goondiwindi LGAs) using the data contained in table titled *Percentage of land type within Toowoomba LGA traversed by the project footprint (outside of existing rail and road corridors)* in EIS Chapter 8: Land use and Tenure. The value of agricultural production in 2020-21 was multiplied by this proportion to understand the potential loss of agricultural value arising from the Project.

This value is an indicative estimate only - it does not consider the value of individual commodities produced per lot or the value-add activities which contribute to the gross value of agricultural production in the region. An assessment of the composition of agricultural production by lot and commodity may be undertaken following detailed design.

This value excluded land area which was already existing rail and road corridors.

grazing. The MDC site will be progressively decommissioned as there will be no need for the MDC facility following Project construction. As such, any potential impacts to land use and tenure will be temporary in nature. The temporarily leased land will be returned to the rural landowner and the current low-intensity agricultural uses of the land will resume. More details related to the construction and operation of the MDC can be found in Appendix AE: Whetstone MDC Preliminary Environmental Assessment.

The locations of the two temporary non-resident workforce accommodation facilities have been identified and included in the Project footprint. Based on data from the QLUMP, these locations have been contained to rural land used for grazing native vegetation and cropping purposes. The Yelarbon non-resident workforce accommodation facility will be located approximately 2.5 km northwest of Yelarbon, with access from the state-controlled Cunningham Highway. The Inglewood non-resident workforce accommodation facility will be located approximately 12 km northeast of Inglewood, with access from the state-controlled Millmerran–Inglewood Road. Following Project construction, opportunities for the beneficial re-use of the established workforce accommodation facilities will be investigated through consultation with local government and relevant stakeholders. If beneficial re-use of these facilities cannot be identified, the clean-up, landscape and rehabilitation of the impacted land related to the decommissioning activities will occur in accordance with ARTC policies and strategies below.

- Inland Rail Environment and Sustainability Policy (refer to Appendix C: Corporate Policies)
- Inland Rail Landscape and Rehabilitation Strategy
- Border to Gowrie Rehabilitation and Landscaping Sub-plan (refer to the Construction Environmental Management Plan in EIS Chapter 24: Draft Outline Environmental Management Plan)

The Project's land requirements are detailed in the EIS Chapter 8: Land Used and Tenure and Appendix F: Impacted Properties. The extent of various impacts to land will be confirmed during detailed design.

The Project footprint will be limited, where possible while providing the necessary land to safely construct, operate and maintain the rail corridor. The revised Project reference design in response to ongoing consultation with key stakeholders includes updating the Project alignment to be closer to the road corridor, resolving short-stacking issues and minimising property impacts. The Millmerran Alternative Alignment has also been implemented to minimise direct impacts to highly intensive animal and agricultural industries, including avoidance of severing Class A, Class B and IAA. Detailed information related to agricultural land impacts across each land class can be found in EIS Chapter 8: Land Use and Tenure. In addition, the changes in Project alignment will reduce adverse economic and social impacts by:

- Creating greater separation between a major Millmerran regional employer's main business infrastructure, and therefore, reducing potential impacts or risks
- Avoiding direct impacts to future planned infrastructure

The alignment of the Project will be further refined during detailed design to ensure the permanent disturbance footprint traverses along, or as close as possible to, property boundaries to reduce potential fragmentation and sterilisation of agricultural land. Impacts, such as severance or loss of land which may have the potential to impact the operations of agricultural businesses, will be considered by the Constructing Authority in the terms of the acquisition agreements.

Acquisition of land used for livestock operations

Following initial public notification, the reference design for the Project has been revised to optimise the design and avoid direct impacts on intensive livestock operations, including feedlots and poultry farms, where possible. According to EIS Chapter 8: Land Use and Tenure, this Project will result in the partial or full acquisition of these properties. ARTC has worked and will continue to work, with landowners to ensure there is minimal disruption to the ongoing operation of intensive animal husbandry.

Where acquisition is required, impacts such as severance of the land parcel, potential fragmentation of infrastructure and services, noise, vibration and lighting may affect the operations of these businesses,

potentially resulting in the loss of employment for farmworkers and reduced economic activity. The extent of these impacts will be confirmed during detailed design.

ARTC will work with directly affected property owners to mitigate potential impacts on farm and business operations and develop cooperative strategies which will reduce impacts on productivity and connectivity. This includes the design of level crossings on private roads and in consultation with GRC, TRC and the Department of Resources, and temporary and permanent access for use of stock routes. ARTC will also implement property-specific measures to address potential impacts on land use, property, access, and water infrastructure.

Disruption to access and infrastructure

The Project may result in impacts on agricultural land outside of the permanent disturbance footprint. Where the Project alignment does not utilise existing rail corridors, the Project may sever or isolate parcels of agricultural land, limiting internal movements and reducing access to agricultural land. As detailed in EIS Chapter 8: Land Use and Tenure, potential land severance may disrupt farm operations through impacts on essential farming infrastructure, services, or access routes and cumulative impacts on loss of agricultural land.

Impacts on the economic viability of farming operations from potential disruptions to accessing land and farming infrastructure are landowner specific. As such, impacts related to disruption to access and infrastructure are not quantified in this assessment. The extent of these impacts will be confirmed during detailed design. ARTC will work with individual landowners to develop suitable solutions based on individual farm management practices.

Water access and infrastructure

The development of the Project may impede essential access to water, through impacts on drainage lines, diversions, and dams. The Project crosses a 12.5 km section of the Condamine River floodplain, which is heavily regulated in terms of water access, especially where the floodplain connects to the Murray-Darling Basin.

Landholders in this area have developed a land management system that maximises productivity by harvesting floodwaters to support the seasonal growth of crops. The Project has been designed to limit the disturbance to water access and infrastructure during both construction and operation.

There are 44 registered bores located within the Project footprint as well as three unregistered groundwater bores. It is anticipated that each of these bores will need to be decommissioned to enable construction of the Project. Decommissioning of bores will be completed in accordance with the *Minimum Construction Requirements for Water Bores in Australia – Edition 4*. There are no impacts anticipated to groundwater outside of the Project footprint. Any disturbance to groundwater bores or irrigation infrastructure will be investigated and addressed in consultation with impacted landowners during detailed design. Refer to Appendix U: Groundwater Technical Report for more information.

Various land holders have been forthcoming with offers to sell all or part of their licenced water entitlements to ARTC for use as construction water. ARTC has developed and is maintaining a register of private water entitlement holders who have made offers to the Project. ARTC will consult with the Department of Regional Development, Manufacturing and Water to confirm that private water sources made available to the Project are lawful and appropriately licensed for the intended usage.

There are approximately 62 approved *Soil Conservation Plans* along the alignment, authorised under the *Soil Conservation Act 1986*. ARTC will work with property owners to amend these plans, implement any necessary works as required and have them approved by the Department of Resources to minimise impacts on landholder operations.

Transport access and infrastructure

During construction, broader accessibility impacts due to changes in the surrounding road network may also affect local agricultural businesses. Roadworks, re-alignments, and changes to travel distances may affect farming businesses through increases in travel times, resulting in increased operating costs. Level crossings and road diversions have been proposed based on a number of factors to ensure accessibility to surrounding road networks is maintained. Where roads are permanently closed or re-routed, these impacts may continue once the Project is operational.

During the Construction Works stage of the Project, a number of level crossings and bridges will be constructed, posing potential constraints to road access and connectivity between properties. Stock and equipment movements may also be affected during this time; however, the impact will be temporary in nature. The newly proposed Whetstone MDC will have the capacity to receive the delivery of bulk track construction materials to support the construction and delivery of the Project, as well as the construction and delivery of other Queensland project sections. Encouraging the use of rail, the MDC will minimise heavy vehicle movement on the road network that would have occurred during Project construction. However, some disruptions to transport and infrastructure access could occur during the construction of the MDC due to increased traffic along the Whetstone Access Road link and intersection with the Cunningham Highway. While some construction materials will be transported via rail, there will be some disruption to the road network from transporting other needed construction materials to the MDC site.

Disruptions to access during construction will be addressed through temporary diversions and onsite traffic management in consultation with the road managers, local community, and landowners, where appropriate. Roads will only be closed permanently where the impact of diversions or consolidations is considered acceptable, or where the existing location is not considered safe and cannot reasonably be made safe. Consultation with landowners will be undertaken to ensure an appropriate level of access is maintained for agricultural businesses across and between properties affected by the Project. During construction, regular Project updates will be provided which forecast road works, road realignments and closures, and explain alternative routes to enable agricultural and other business operators to plan their travel with minimal disruptions.

Further details are provided in EIS Chapter 20: Traffic, Transport and Access.

Disruption to stock movement

The Project footprint interfaces with stock routes at 12 locations, at Kildonan Road at Kurumbul, Rainbow Reserve and Eukabilla Road, South Kurumbul Road, Wondalli-Kurumbul Road and Yelarbon-Kurumbal Road, Yelarbon near Merton Road, East of Sawmill Road, Lovells Crossing Road, Millmerran-Inglewood Road (3 separate locations), Koorongara-Andersons Road, Kooroongarra Road, and the Warrego Highway near Chamberlain Road. Further information on stock routes can be found in EIS Chapter 5: Project Description.

Refinements to the Project design in response to public submissions have included a separated level crossing at Kildonan Road to maintain stock movements across the railway, the realignment of Eukabilla Road to avoid fragmentation of the route, an active level crossing at South Kurumbul Road and the re-alignment of the stock route at Yelarbon to provide continued connectivity.

The Land Use and Tenure Assessment (EIS Chapter 8) identifies that there may be informal stock routes used to transfer stock to various grazing paddocks and holding yards. Consultation is ongoing with landholders to identify impacts, if any, on informal stock routes.

ARTC has worked with the Goondiwindi Regional Council and the Department of Resources to ensure the planning of the proposed Project alignment maintains the connectivity of stock routes.

Hydrology and periodic inundation

There are 18 defined watercourses within the impact assessment area are listed below:

- Macintyre River
- Macintyre Brook
- Canning Creek
- Pariagara Creek
- Cattle Creek
- Bringalily Creek
- Nicol Creek

- Back Creek unnamed tributary
- Back creek
- Grasstree Creek
- Condamine River (Main Branch)
- Condamine River (North Branch)
- Umbiram Creek unnamed tributary
- Half Mile Gully
- One Mile Gully
- Westbrook Creek
- Dry Creek
- Gowrie Creek.

In addition, the Project crosses 81 minor waterways (stream order < 3). Together, these floodplains contain productive agricultural land, including irrigated land in places.

The Inland Rail revised reference design includes cross-drainage structures in the form of bridges and culverts to maintain existing surface water flow paths and flood flow distributions. The Project's design criteria objectives include avoidance of unacceptable increases in peak water levels, velocities, and time of submergence. The Project does not increase the existing extent (i.e. footprint) of flood inundation.

The Project may necessitate localised modification of land management practices, including the cropping regime, in response to confirmed afflux and time of inundation impacts. The extent of these impacts will be confirmed during detailed design. ARTC will work with landholders to develop suitable property-specific solutions based on land management practices.

Improvements in supply chain efficiency

Efficient supply chains support the regional and national capacity to enhance economic opportunities within local communities. The Project is a critical segment in the broader Inland Rail Program, to create a more direct rail freight corridor, offering a more efficient solution for intrastate and interstate freight operators who will be able to avoid inland and coastal road and rail networks. Specifically, the Project:

- Offers opportunities to improve the productivity of local export industries (such as agriculture);
- Improves freight transportation infrastructure between the eastern and western sides of the Great Dividing Range; and
- Has the potential to unlock the construction of ancillary and complementary infrastructure, which will improve market access and expand local agricultural businesses and industry (see *Transport Industry - Freight and Logistics below*).

Noise

There is potential for construction and operational noise to impact livestock production, in particular for poultry, cattle feedlots and piggery livestock. Increased noise levels may induce stress responses and impact on production capabilities of these animals. In response to public notification, ARTC has revised the Project alignment to avoid direct impacts on intensive livestock production. For more information on changes to noise during construction and operation refer to EIS Chapter 16: Noise and Vibration.

The Social Impact Assessment (Appendix X) identifies management measures to mitigate local business and industry impacts, including those on livestock producing businesses. This includes engagement with businesses

that may experience noise exceedances to develop and implement feasible and effective mitigation measures to reduce impacts.

5.5.2 Tourism industry

The Project has the potential to change local amenity and service capacity within the impact assessment area, during both construction (temporary) and operation (permanent).

During construction, there is potential for tourists' experiences and travel times to be affected by road works, bridge construction, the visual impact of laydown areas and the accommodation of non-residential workers. In addition, noise impacts associated with the establishment of the Whetstone MDC are expected to be experienced by tourism businesses within and around the nearby towns of Inglewood and Yelarbon. These impacts will be temporary whilst construction activities for the Project are undertaken in particular areas. Mitigation measures, including the implementation of noise barriers and time restrictions, have been considered to minimise these potential impacts. A detailed overview of noise and vibration assessments and corresponding mitigation measures can be found in Chapter 16: Noise and Vibration, Appendix V: Noise and Vibration Assessment – Construction and Road Traffic and Appendix W: Noise and Vibration Assessment – Railway Operations of the revised draft EIS.

As described in the Social Impact Assessment (Appendix X), the Project's accommodation management plan requires the Contractor to consult with tourism associations and accommodation providers in potentially impacted communities (Goondiwindi, Yelarbon, Inglewood, Millmerran, Pittsworth and Brookstead) to identify interest and capacity to accommodate Project personnel. Any usage of short-term accommodation for the Project will be monitored and peak occupancy periods will be avoided in construction scheduling. To mitigate potential impacts on local housing access and short-term accommodation, three temporary non-resident workforce accommodation sites have been proposed (located near Millmerran, Inglewood and Yelarbon). The provision of non-resident workforce accommodation facilities will reduce excessive demands on short-term tourism accommodation and support road safety by enabling the coordination of workforce transport to and from worksites.

Following construction, the buildings and infrastructure established for the non-resident workforce accommodation, or a component thereof, may be left for community use. This will be undertaken in consultation and agreement with key stakeholders, property owners and the relevant Regional Councils. This may enhance access to local facilities, with the potential to support tourism, such as in Millmerran. During consultation undertaken by ARTC, the Toowoomba Regional Council identified the location of a non-resident workforce accommodation facility near Millmerran as having the potential to provide legacy benefits to support regional tourism. ARTC plans further consultation with Toowoomba Regional Council to identify the third non-resident workforce accommodation site.

During operation, there is potential for reduced scenic amenity due to the Project's location within the rural and regional landscape. It is likely that some stakeholders, including visitors to the area, will see the Project as diminishing rural character while others will find interest in the Project structure. According to the Social Impact Assessment (Appendix X), this is not expected to have a significant impact on tourism visitation.

As described in Section 1.3, Goondiwindi Regional Council's latest visitor strategy seeks to implement key priority projects to support tourism growth in the region. It is not anticipated the Project will impede the implementation of these key projects. Tourism impacts in the Goondiwindi region are expected to be consistent with what is described above during the construction and operation of the Project.

5.5.3 Mineral resource and petroleum interests

According to EIS Chapter 8: Land Use and Tenure, revised reference design has been based on consultation with resource interest holders, and the locations of the Project alignment have been determined to minimise the potential sterilisation of mineral and petroleum resources and to minimise the restriction of access to mineral resources or disruption to existing working mines. In some instances, mineral and petroleum resources could

not be avoided by the Project footprint. The extent of the impact of the Project on current mineral resource permits, licences and leases will be confirmed during detailed design.

ARTC will continue to consult with potentially impacted holders of leases, permits or licenses over mineral and petroleum resources through the detailed design and construction planning process to ensure that the Project and its construction activities are developed in a manner to minimise the extent of such impacts where possible. Where the Project may impact deposits within the area, such as the Bringalily North, Bringalily South and Commodore coal deposits, appropriate mitigation will be agreed upon with the resource interest holders.

5.5.4 Local businesses

Construction materials

The Project will require a range of construction supplies, including borrow material (spoil, gravel, or sand) and ballast material (crushed stone), pre-cast concrete, concrete sleepers, pre-built and panelled turnouts, steel, fencing, electrical components, fuel, and consumables.

The impact of the Project on local businesses is likely to vary depending on the location of the businesses along the Project alignment. Due to their scale and experience, businesses in Toowoomba are more likely to have the capacity and capability to support the construction of the Project compared to rural businesses along the Project alignment. The Project would provide a boost to businesses in Toowoomba which experienced a slow-down following completion of the Toowoomba Bypass. Businesses across the Social Impact Assessment impact assessment area can benefit from direct involvement in the Project's construction (including the rail corridor and non-resident workforce accommodation).

Where required, small businesses will likely need to develop their capacity to ensure that they can competitively participate in the Project's supply chain. ARTC acknowledges that small businesses need time to upskill and prepare to tender for major projects. Through the *Industry Participation Policy*, ARTC has started preparing local businesses to tender for the Project and other major projects in the region. To achieve this ARTC will provide full, fair and reasonable opportunity for capable and competitive Australian entities to bid for the supply of goods and services on the Project.

ARTC has confirmed that pre-cast concrete can be sourced within the Project region, ballast material can be sourced from local quarries and borrow pits, and other components such as rehabilitation supplies and fencing can be sourced within the Project region. Inland Rail will source sleepers from Austrak, a Rockhampton manufacturer. Sleepers may also come from their Wagga facility, thereby increasing the current duration of their existing plant life. ARTC has also confirmed contracts with Liberty Primary Steel (located in Whyalla) to supply heavy-duty rail tracks and Vossloh Cogifer Australia to supply turnouts.

The Inland Rail Program 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. Further, ARTC has developed the *Inland Rail Sustainable Procurement Policy (2020)* and *Industry Participation Policy*, which will ensure that local, regional, and Indigenous businesses will have opportunities to supply the Project by maximising the involvement of businesses with existing capacity and focusing on building local businesses' capacity.

The Project's draft SIMP (see Social Impact Assessment – Appendix X) further specifies that construction Contractors are required to identify potential cooperation or partnerships for the development of employment and business capability development in the Project area.

Transportation

The Project may provide opportunities for transport or logistics businesses in Goondiwindi, Toowoomba, and other localities in the impact assessment area. Opportunities include transporting materials to laydown areas and removing waste materials and recyclables from construction compounds and non-resident workforce accommodation facilities. Other opportunities include transporting a full spectrum of rail construction materials to the MDC.

Following construction, these opportunities for transport or logistics businesses have the potential to expand over the long term, particularly if a regional rail distribution point, rail-based warehousing or associated freight precincts are established on the Project alignment.

During operation, the anticipated mode shift from road freight to rail freight is likely to reduce the number of heavy vehicles travelling on the road network, with the potential to impact the levels of trade for local transportation businesses. These impacts may be partially offset by the aforementioned opportunities for investment and increased activity in freight/logistics operations adjacent to Inland Rail.

Freight and Logistics

As part of Inland Rail, the Project has the potential to stimulate business and industry development at the Toowoomba Enterprise Hub in Wellcamp. By providing efficient transport access to intrastate and interstate markets, the Project has the potential to act as a catalyst for further private-sector investment in this area, particularly for freight and logistics operations. The further development of the Toowoomba Enterprise Hub has the potential to unlock greater economic activity in the region, by promoting greater international export opportunities via Wellcamp Airport.

Local service and supply businesses

The Project is likely to offer opportunities in secondary service and supply industries (such as retail, hospitality, and other support services) for businesses near the construction footprint and non-resident workforce accommodation facilities. The expansion in construction activity has the potential to support additional temporary flow-on demand and additional spending by the construction workforce in the local community, which is likely to lead to increased trading levels for small businesses, such as food and beverage and other retail businesses in the impact assessment area. As described in Social Impact Assessment (Appendix X), consultation has shown local businesses are positive about opportunities in secondary service and supply industries.

Retail businesses in Millmerran, Inglewood and Goondiwindi have the potential to benefit from opportunities to supply materials and services to the Project's non-resident workforce accommodation facilities. Some local retail businesses may also benefit from increased trade from workers residing in these accommodation facilities. The construction of the Whetstone MDC will provide opportunities for retail businesses in nearby towns, such as Yelarbon and Inglewood, to experience a positive impact from increased trade derived from the MDC workforce. The nearby towns, to the Whetstone MDC and non-residential workforce accommodation facilities, may experience temporary increases in population that could impact road safety or result in more non-local personnel in the area. An increase in the demand for construction labour may also contribute to shortages in specific trades and labour for some local service and supply businesses. More information related to labour demand, and business and industry impacts can be found in Appendix AE: Whetstone Material Distribution Centre Preliminary Environmental Assessment.

As identified in the Social Impact Assessment (Appendix X), some small businesses will likely need to scale up their current capacity if they wish to participate in the Project, particularly for businesses in rural areas along the alignment.

Following Project approval, ARTC and Contractors will identify potential cooperation or partnerships for the development of employment and business capacity in the impact assessment area (see Social Impact Assessment, Appendix X).

Telecommunications

The Inland Rail Program is planning telecommunications systems as part of construction requirements and ongoing safe rail operations. ARTC is working with telecommunications carrier network operators to provide services for construction site offices, non-resident workforce accommodation facilities and the railway corridor. While the focus will be on the provision of voice and high-speed data services in the vicinity of the rail corridor, there is the potential for telecommunications capacity and digital connectivity to be improved for landowners and residents close to the Project alignment.

While telecommunications expansions beyond the Project's requirements are not within the Project scope, Inland Rail is committed to leaving a positive legacy in this regard and has actively advocated for its stakeholders by establishing a dedicated Telecommunications Working Group.

Noise and amenity

There is potential for noise to impact the amenity of businesses in the towns of Yelarbon, Brookstead, and Pittsworth, particularly retail and hospitality businesses, during the construction and operation of the Project.

As detailed in the EIS Chapter 16: Noise and vibration, businesses that may be impacted by construction noise include:

- Yelarbon Post Office (50 m south of the Project footprint);
- The Brookstead Store and Post Office, Brookstead (140 m north of the Project footprint);
- Two buildings with office usage in Brookstead; and
- One building with office usage in Yelarbon.

Short-term accommodation businesses are likely to experience some negative impacts as a result of increased noise during construction which may result in loss of income. ARTC will consult with businesses within towns where construction noise could affect their amenity and consider their feedback in finalising plans for works near their businesses.

During construction, impacts will be managed through the implementation of the *Noise and Vibration Management Sub-plan*, developed as a component of the *Construction Environmental Management Plan* (refer to EIS Chapter 16: Noise and vibration). Additionally, the Project includes an investigation of noise barriers in Yelarbon, Pittsworth and Brookstead to mitigate predicted exceedances of operational rail noise criteria. Outside of these key townships, measures to suitably reduce railway noise impacts are expected to be limited to property controls such as architectural property treatments and upgrades to property fencing.

The construction of the newly proposed Whetstone MDC that relies on the rail network for receiving bulk track construction materials will minimise noise from heavy vehicle movement on the road network that would have occurred during Project construction. Located more than one kilometre from the nearest homes in Whetstone, some noise impacts associated with the establishmentof the MDC have been highlighted in EIS Chapter 16: Noise and vibration. These temporary impacts from establishing and operating the MDC site could be experienced by tourism businesses within and around the nearby towns of Inglewood and Yelarbon. However, a range of mitigation measures, including the implementation of noise barriers and time restrictions, have been considered to minimise these potential impacts. Refer to EIS Chapter 16: Noise and vibration for further details regarding potential impacts and mitigation measures.

The Social Impact Assessment (Appendix X) identifies management measures to mitigate local business and industry impacts. These management measures include engagement with businesses that may experience noise exceedances to develop and implement feasible and effective mitigation measures to reduce impacts.

Land acquisition

The land acquisition process is to be undertaken by Department of Transport and Main Roads (TMR) as the Acquiring Authority. Based on ARTC's consultation with landowners, most of the landowners impacted by the Project are expected to be able to adjust operations and continue to operate their businesses. Consultation to date indicates that business operations (non-agricultural) where acquisition would result in the closure or relocation of the business or retirement of the business owner include:

- Two transport businesses: one near Pittsworth and a second near Southbrook;
- Three grazing operations;
- One cropping farm; and

- One welding business in Umbiram.

Additional information related to land acquisition and requirements for the Project is detailed in EIS Chapter 17: Social and Appendix F: Impacted Properties. The extent of these impacts will be confirmed during detailed design with compensation to be provided in accordance with the *Acquisition of Land Act 1967* (Queensland).

5.6 Cumulative impacts

The cumulative EIA refers to the potential impact of cumulative stimulus on the economy resulting from a set of existing or planned projects within or adjacent to the impact assessment area. Cumulative impacts may result from the spatial and/or temporal interactions between these projects.

For the purposes of this EIA, the cumulative impact assessment has two components:

- **Inland Rail Program - Northern sections (Section 5.4)**

  A quantitative assessment of the cumulative macroeconomic impact of Inland Rail on the economy, resulting from the construction of adjacent sections of Inland Rail.

  Five sections of Inland Rail fall in Queensland, including the Border to Gowrie , Gowrie to Helidon , Helidon to Calvert , Calvert to Kagaru and Kagaru to Acacia Ridge and Bromelton . In addition to this, the assessment also includes the CAPEX costs of two Inland Rail sections in New South Wales that (at the time of modelling) have an overlapping timeline with the construction of the Project – Narrabri to North Star and North Star to Border.[87] However, the potential impacts associated with establishing the MDC to support the construction and delivery of the adjacent sections of the Inland Rail Program are not captured in the cumulative EIA.

- **Broader cumulative assessment (Section 5.6.2)**

  A qualitative assessment of the potential cumulative impacts of state significant projects that have been identified by ARTC as having a relationship to the Project – refer to Appendix A of this document for impacts related to local and regional labour markets, the supply chain and local businesses.

5.6.1 Inland Rail Program – Northern sections

The construction stages of the Queensland (Gowrie to Kagaru) and two New South Wales sections (Narrabri to North Star and North Star to Border) of Inland Rail have been jointly simulated to analyse the cumulative economic impacts of these projects. Hereafter, these sections will be referred to as the northern sections. Table 26 summarises the cumulative macroeconomic impacts in the catchment regions of Queensland under the labour market assumptions that are believed to be most likely to materialise. The incremental economic impacts of the northern sections include an increase in real GDP of $1.5 billion (measured in 2022 dollars) and an increase in the average number of jobs over the period FY2023 to FY2030 of 548 jobs per year.

The Project is the only segment of Inland Rail that is located within the Darling Downs – Maranoa region. Construction activities related to this segment will directly impact the Darling Downs – Maranoa economy. The remaining sections of Inland Rail included in this assessment are located in the Greater Brisbane, Toowoomba, and New England – North West regions, which will impact the Darling Downs – Maranoa economy indirectly.

The regional impact analysis discussed in Section 5.4 reported the results of simulations when the Project segment was modelled in isolation. In that context, the direct and indirect incremental change to jobs in the Darling Downs – Maranoa economy was estimated to be 332 jobs per year. When all the northern sections are considered jointly, the incremental change to jobs (direct and indirect) in Darling Downs – Maranoa decreases marginally to 326 jobs per year during the Project's Construction Works stage (FY2024 to FY2028). The incremental change to jobs in Darling Downs – Maranoa peaks in 2026 at 559 jobs. As discussed in the regional impact analysis in Section 5.4, the labour market conditions across the regional economies in Queensland over

[87] Project located in Queensland and in close proximity to the Project have been considered in the cumulative impact assessment. Other Inland Rail Project have not been considered as it is unlikely the construction of these will have a cumulative impact on the economy when considered alongside the Project.

the Inland Rail construction stage period are generally expected to be closer to a tight rather than slack characterisation. In a tight labour market, an increase in demand for labour is accommodated mainly through an increase in real wages, while in a slack labour market, an increase in labour demand is accommodated mainly by a decrease in the unemployment rate with little impact on real wages.

Table 5-12: Summary of Queensland wide economic impacts over the period FY23 to FY30

	GRP/GDP ($m 2022)	Jobs (persons)		
		Average (annual)	Peak	Year of Peak
Greater Brisbane	$626	277	1,099	2026
Darling Downs - Maranoa	$425	191[(a)]	559	2026
Toowoomba	$1,089	658	1,751	2027
Remainder of Queensland	-$90	-76	26	2025
Queensland	***$2,050***	***1,050***	***3,244***	***2026***
Remainder of Australia	-$552	-502	298	2025
Australia	$1,498	548	3,177	2026

Source: KPMG

Note: (a) This is the annual average additional jobs over the period FY23-FY30, from when the first CAPEX costs of all the Inland Rail sections included in the cumulative study (NS2B) are expected to be made to the last one (G2H). The annual average employment impact over the Project Construction Works stage (FY24 to FY28) in this cumulative impact analysis is estimated to be 326 jobs.

5.6.2 Broader cumulative assessment

Interacting projects

There is a range of projects, within or adjacent to the impact assessment area, that may contribute to local and regional economic impacts. These projects are detailed in Table 27,[88] with the potential cumulative impacts on the local and regional labour market, local businesses and supply chain also detailed.

The details provided in Table 27 reflect known information at the time of drafting this EIA. Further details on the cumulative impacts of the Project can be found in EIS Chapter 23: Cumulative Impacts.

Table 5-13: Cumulative projects and nature of potential impacts

Project and Status	Nature of impact
North Star to Border -Inland Rail (approved)	• Potential labour draw from the regional economic catchment (peak 350 FTE during construction period) • Potential draw on construction materials from the regional economic catchment • Businesses within the catchment area (e.g. in Goondiwindi and Yelarbon) are likely to benefit from the Project as a result of increased local expenditure from construction personnel of the combined Inland Rail projects • Potential impact on rental housing availability and affordability in Goondiwindi

[88] Projects listed are those which may contribute to local and regional economic impacts. Please refer to EIS Chapter 23: Cumulative Impacts for a full list of cumulative projects.

Project and Status	Nature of impact
Gowrie to Helidon - Inland Rail (Reference Design and EIS)	• Potential labour draw from the regional economic catchment (peak 596 FTE during construction period) • Potential draw on construction materials from the regional economic catchment • Businesses within the catchment area (e.g. in the Gowrie Junction area) are likely to benefit from the Project as a result of increased local expenditure from construction personnel of the combined Inland Rail projects • Employment opportunities and regional development, in relation to the Toowoomba Enterprise Hub
Helidon to Calvert - Inland Rail (Reference design and EIS)	• Potential labour draw from the regional economic catchment (peak 410 FTE during construction period) • Potential draw on construction materials from the regional economic catchment
Calvert to Kagaru - Inland Rail (Reference design and EIS)	• Potential labour draw in SEQ may reduce labour availability for more specialised roles (peak 536 FTE during the construction period) • Potential regional development opportunities across SEQ's south-west industrial corridor and in the Western Gateway regional economic cluster
Cross River Rail (Construction commenced)	• Potential labour draw in SEQ may reduce labour availability for more specialised roles (1,500 direct and indirect FTE each year during construction)
South East Queensland Correctional Centre Precinct Stage 2	• Potential labour draw in SEQ may reduce labour availability for more specialised roles
Wellcamp Intermodal Terminal	• Potential labour draw in SEQ may reduce labour availability for more specialised roles
Wellcamp Entertainment Precinct	• Where construction schedules overlap, potential labour draw from the regional economic catchment
InterLinkSQ	• Potential labour draws in SEQ with continued development until Inland Rail is operational. May reduce labour availability for more specialised roles
Australia Pacific LNG Project	• Potential labour draw in SEQ with continued gas field development
Macintyre Windfarm	• Where construction schedules overlap, potential labour draw from the regional economic catchment
Sapphire Feedlot (Operational with plans for expansion)	• Where construction schedules overlap, potential labour draw from the regional economic catchment
Wyemo Piggery (Approved with conditions)	• Where construction schedules overlap, potential labour draw from the regional economic catchment
Bengalla Beef Feedlot (planning stage)	• Where construction schedules overlap, potential labour draw from the regional economic catchment
Goondiwindi Abattoir (Approved with conditions)	• Potential labour was drawn from the regional economic catchment
New Acland Coal Mine Stage 3	• Potential labour was drawn from the regional economic catchment

Project and Status	Nature of impact
Wellcamp Business Park (Operational – subject to continuing construction and expansion)	• Requirement for civil construction labour, resulting in cumulative demand for skilled trades and civil construction labour, however, development is likely to be incremental over a longer period with relatively modest labour draw • Potential regional development opportunities across SEQ's south-west industrial corridor and in the Western Gateway regional economic cluster
Witmack Industry Park & Charlton Logistics Park (Operational – subject to continuing construction and expansion)	• Requirement for civil construction labour, resulting in cumulative demand for skilled trades and civil construction labour, however, development is likely to be incremental over a longer period with relatively modest labour draw • Potential regional development opportunities across SEQ's south-west industrial corridor and in the Western Gateway regional economic cluster
Asterion Medicinal Cannabis Facility	• Where construction schedules overlap, potential labour draw from the regional economic catchment

Source: ARTC

Cumulative labour market impacts

The concurrent construction of interacting projects has the potential to increase the demand for labour in the local and regional economy, particularly for workers with trade and construction skills/knowledge. The demand for construction workers within a similar timeframe will lead to cumulative demands on construction labour, not only within the local and regional economy, but also across Queensland, New South Wales, and potentially nationally.

The results of the regional EIA indicate a deterioration in the Darling Downs – Maranoa labour market based on observations in recent statistics, and the Project schedule may also be optimised to minimise market impact. It is reasonable to assume that the regional labour market will have some capacity to supply a portion of the workforce requirements of the Project. However, these conditions may change in the context of cumulative labour market demand. Major infrastructure projects in the adjacent and surrounding areas, including those associated with Inland Rail, have the potential to put some pressure on labour markets if inopportune scheduling results in cumulative and competing demand for trades and construction labour. However, the overall labour demands of the various infrastructure projects that are expected to be constructed were modest, and that scheduling could be optimised to minimise market impact. The best estimates of prevailing trends in the Darling Downs – Maranoa labour market, and the ability of construction workers to mobilise to Project locations, suggest that the risks of labour market disruption can be reduced.

There may be benefits from having additional infrastructure projects in the adjacent and surrounding areas around the same time as the Project. These benefits come in the form of lowered mobilisation costs and the ability to transfer labour experience and skills between projects, particularly those constructed in the period leading up to, and the period following the Project's Construction Works stage.

Cumulative impacts on local businesses

The expansion in construction activity and regional employment (with a subsequent increase in temporary and non-resident populations) has the potential to increase demand for a range of local infrastructure and services, including housing, health care, childcare, and education. Furthermore, spending on consumer-orientated products by the construction workforce has the potential to benefit local businesses by increasing their trading levels. Importantly, some businesses may need to scale up their current capacity to support cumulative demand, while also understanding the temporary nature of the construction period for the relevant projects and adjusting capacity accordingly.

Cumulative supply chain impacts

Cumulative supply chain impacts are likely to be realised where construction timeframes occur concurrently and comparable material is required, e.g. the adjacent Inland Rail projects. Opportunities to supply these projects may include the supply of fuels, equipment, borrow and quarried material. Where materials are sourced within the surrounding regions, increased local expenditure is likely to increase local and regional economic activity. The Project will seek opportunities to maximise efficiencies in obtaining supplies across Inland Rail project sections and only source materials from commercial quarries currently in operation.

However, should the demand for material surpass supply, resulting in a shortage of available material, input costs to the Project may increase (due to increased prices of materials) driving up the total construction cost, and negatively impacting the economic return of the Project.

5.7 Legacy impacts

There is potential for the Project to provide long-term legacy benefits to local communities from Project investments which remain after the Project is constructed and operational. Legacy impacts have been identified through local consultation undertaken by ARTC. Further discussion on possible legacy benefits is addressed in the Social Impact Assessment (Appendix X).

5.7.1 Local skills and business capacity

The Project's provision of training and employment opportunities, particularly for local and Indigenous businesses, will support local skills development, enabling ongoing opportunities for local workers in major projects beyond the construction of Inland Rail. The Inland Rail Skills Academy is central to this, supporting skills and capability development for both construction and operation of major projects.

5.7.2 Road safety

Reduced freight truck movements on the local and State road networks will enhance road safety for the region over the long term. This will reduce the health, social and economic costs to the community associated with road incidences in the region. This has been quantified as crash cost savings, environmental externalities, and road decongestion benefits in the economic assessment.

The Project will also improve the safety of road-rail interfaces on the existing brownfield rail corridor. The design has optimised the number of grade-separated crossings and active level crossings, reducing the risk of potential safety incidents and associated costs to the community.

5.7.3 Economic development

The operation of the Project as part of the broader Inland Rail Program will facilitate wider regional economic development, such as the establishment of intermodal facilities. This will benefit local businesses in the region and provide greater local employment opportunities for workers. The Toowoomba and Goondiwindi LGAs are well-positioned to benefit from additional economic development arising from the Project due to existing transport and logistics industry hubs in the area.

5.7.4 Community projects

ARTC is considering opportunities that will deliver significant legacy benefits for communities across Inland Rail, in addition to community projects which will be identified as part of the Project's Community Wellbeing Plan.

In particular, there is community interest in retaining laydown areas and/or infrastructure within non-resident accommodation facilities so their value can be maintained by property owners, businesses, or community members. This will be determined as part of ongoing engagement with local stakeholders.

Additional community projects which may provide legacy benefits captured as part of consultation on the *Community Wellbeing Plan* include:

- Creating a keeping place for Indigenous history, art and culture;
- Naming rail sidings after Indigenous people;
- Contributing to streetscape projects in Yelarbon;
- Providing community facilities;
- Capturing the opportunity for non-resident workforce accommodation facilities to augment long-term accommodation or housing supply;
- Sponsoring expanded emergency health retrieval services;
- Facilitating the development of town infrastructure (such as waste management, roads, and water access); and
- Community values monitoring and planning resources.

5.7.5 Digital connectivity

ARTC is working with telecommunications carrier network operators to provide services for construction site offices, non-resident workforce accommodation facilities and ongoing safe rail operations as part of the Project. While the focus will be on the provision of voice and high-speed data services in the vicinity of the rail corridor, there is the potential for telecommunications capacity and digital connectivity to be improved for landowners and residents close to the Project alignment. Improved digital connectivity can provide greater access to information and markets improving the economic outcomes for both businesses and individuals.

While telecommunications expansions beyond the Project's requirements are not within the Project scope, feasibility studies into the augmentation of telecommunications along the Inland Rail alignment are being undertaken.

6 Impact management

The Project will result in a number of economic impacts, both positive and negative which will be realised at a local and regional level. A number of strategies to avoid, reduce or mitigate the negative economic impacts, and enhance and facilitate the capture of positive impacts (benefits) have been proposed by ARTC.

Following initial public notification, the reference design for the Project has been revised to optimise the design and minimise negative impacts. This includes avoiding direct impacts on intensive livestock operations.

A draft SIMP has been developed which outlines how the Project will engage with communities and stakeholders, mitigate social impacts, enhance Project benefits for the impact assessment area and Project region, and monitor and report on the delivery and effectiveness of management measures.

Two sub-plans are directly relevant to the economic impacts identified and assessed in this EIA – *Workforce Management* and *Local Business and Industry*. A summary of the impacts and benefits identified in this EIA and the relevant ARTC commitments within the draft SIMP sub-plans are provided in the Table 28 below. Further details of these plans can be found in the Social Impact Assessment (Appendix X).

In addition, a detailed overview of the proposed approaches to mitigate and manage the social and economic impacts associated with establishing the Whetstone MDC can be found in Appendix AE: Whetstone MDC Preliminary Environmental Assessment.

Table 6-1: Social Impact Management Sub-Plans

Impact / Benefit	Mitigation measure
Project Employment The Project has the potential to be a significant opportunity to support local employment, including Indigenous and youth employment opportunities.	Workforce management measures: • Development of a *Workforce Management Plan* that includes a comprehensive employee induction program addressing, amongst other matters, a code of conduct for employees and contractors regarding behaviour, alcohol, and drug use, cultural awareness, and safety • The Contractor will utilise the Inland Rail Skills Academy's programs to support meeting its commitments • The Project's recruitment strategy will provide equitable access to employment opportunities and prioritise recruitment from Goondiwindi and Toowoomba LGAs • Minimum local employment targets will be negotiated and agreed between ARTC and the Contractor. Minimum benchmarks guiding Project planning include: o An employment target of 15.0 per cent from within the SIA study area (comprising Toowoomba LGA and Goondiwindi LGA) o An Indigenous employment participation target of 4.0 per cent o Workforce training target will exceed the 15.0 per cent core requirement set by the Queensland Government's Building and Construction Training 353 Workforce management measures o An 11.0 per cent female participation target during the Construction Works stage • ARTC will endeavour to ensure that Contractors seek to encourage employment, training, and skills development opportunities by: o Identifying the skills required for the building, construction, equipment and services fabrication and supply, maintenance, operation, and support to Inland Rail o Arranging timely training, and qualification arrangements to meet the needs of skills development to support all stages of the Project o Ensuring that training and qualification systems meet the requirements of the National Standards Framework • The Project will:

Impact / Benefit	Mitigation measure
	○ Work with key partners to link training and development programs with other projects and local industries to provide the greatest regional benefit ○ Provide a clear and efficient process for people to seek information about employment opportunities and register their interest in Inland Rail ○ Work with Indigenous communities, industry, and government agencies to support the design and delivery of training and development programs to improve local capacity where this is needed ○ Work with schools and local training providers to provide appropriate training, including science, technology, engineering, and mathematics initiatives and scholarships for students from potentially impacted communities ○ Work with the Australian Government to provide long-term outcomes through training, mentoring and other support programs ARTC will investigate and implement best industry practices with respect to construction personnel, including journey management and the potential for shared driving arrangements.
Local Business and Industry Participation The Project will have significant construction materials and service requirements which may provide local businesses with the opportunity to supply the Project.	Local business and industry participation measures: • Development and implementation of an *AIP Plan* focusing on opportunities for involvement by local businesses in the construction and operation of the Project that involves: ○ Identifying businesses within 125 km of the Project with potential capacity to supply the Construction Works stage ○ Engagement with local businesses to identify opportunities to develop and promote local business participation • Engagement with the Department of Employment, Small Business and Training and Department of Housing, Local Government, Planning and Public Works to develop business capacity building strategies • ARTC will continue to engage with Toowoomba and Surat Basin Enterprise, chambers of commerce and local business groups/associations • ARTC will consider providing the Local Content Report to the Australian Industry and Skills Committee when developed • Implementation of ARTC's Sustainable Procurement Policy • Indigenous participation and local participation are included as key elements of construction tender assessments • ARTC will work with government stakeholders and local and Indigenous businesses to: ○ Build businesses' capacity to participate in the Project's supply chain through business development, mentoring and pre-qualification projects ○ Support Indigenous businesses to ensure they are prepared for and provided with opportunities to participate • Link training and development programs with other projects and local industries to provide the greatest regional benefit.

Source: Appendix X - Social Impact Assessment

There are a number of economic impacts identified within this EIA that relate to agricultural properties and businesses. Where these impacts cannot be avoided, a range of measures has been proposed by ARTC to carefully manage and mitigate these impacts. The measures summarised in Table 29 below are not captured within the draft SIMP but represent commitments by ARTC. Further details are provided in EIS Chapter 8: Land Use and Tenure.

Table 6-2: Summary of proposed management and mitigation measures for agricultural impacts

Impact	Proposed Mitigation / Management Measures
Impacts on agricultural properties including loss of productive land, impacts on property infrastructure, and interruptions to stock and product movements.	ARTC will continue to consult with farmers, graziers and owners of agricultural businesses which are directly affected by, or are adjacent to, the Project footprint during the detailed design stage to develop measures to mitigate impacts, including: • Individual property mitigation measures developed in consultation with landowners/occupants with respect to the development of detailed design and/or the management of construction on, or immediately adjacent to, private properties. The property mitigation measures will detail required adjustments to fencing, access, farm infrastructure, and relocation of any impacted structures, as required. • Consultation with landowners will be undertaken to ensure that owners and occupiers are informed about the timing and scope of activities in their area, particularly in relation to potential impacts to access, services, or farm operational arrangements. This consultation will be ongoing throughout construction. • Feedback from landowner consultation, including agreed property mitigation measures, will be incorporated into property agreements (or similar), as appropriate. ARTC will continue to work with directly affected landowners to develop and implement property-specific measures to mitigate impacts on properties that could affect agricultural enterprises.
Sterilisation or disruption of access for mineral resources or disruption to existing operational mines.	• Consultation with resource interest holders will continue through detailed design. Where the Project may impact potential resources within the area, appropriate mitigation will be agreed upon with the resource interest holders.

Source: EIS Chapter 8: Land Use and Tenure

7 Conclusions

A detailed EIA has been undertaken for the Project segment of Inland Rail, in accordance with the requirements under Sections 5.1 and 11.141 of the Border to Gowrie ToR. Following the initial public notification period for the draft EIS, this EIA also addresses additional RFI requirements from the Coordinator-General, including revised economic impacts and associated mitigation measures resulting from a revised reference design.

Inland Rail Program impacts

In accordance with the requirements of the Border to Gowrie ToR, this EIA has focussed on the specific economic impacts resulting from the construction and operation of the Project. However, the assessment acknowledges the role of the Project, and the remaining project sections, in collectively delivering the benefits of Inland Rail. In its entirety, Inland Rail will enhance Australia's existing national rail network and serve the interstate freight market. As per the *Inland Rail Programme Business Case (2015)*, key economic impacts of Inland Rail include:

- Lower prices for consumers as a result of lower inter-capital freight transport costs, which reduces the cost of living for households.
- Positive direct net economic benefits, driven by improvements in freight productivity, reliability and availability, and benefits to the community from reduced environmental externalities, reduced road congestion and improved safety benefits. The Inland Rail Program is stated to be economically viable with a benefit cost ratio of 1.02 at a 7 per cent discount rate (2.62 at a 4 per cent discount rate).
- Economic growth is increased profits (for industries and producers where intercapital freight is an input or output) and incomes are multiplied through the economy. The Inland Rail Program is anticipated to deliver a net positive impact of $16 billion on GDP ($2015) over its 10-year construction period and 50 years of operation.
- Nationally, Inland Rail is also expected to deliver an additional 16,000 jobs at the peak of construction, and an average of 700 additional jobs per annum during operation.
- Enhanced competition between rail and road freight, by providing a credible transport alternative, which will drive further innovation and efficiency.
- Potential to promote the expansion and development of freight precincts around Inland Rail terminals as a result of the benefits from co-location and clustering of industries (as a result of reduced transport costs to warehousing, economies of scale and knowledge-sharing opportunities).

Economic benefits assessment

The economic benefits assessment estimates that the Project is expected to provide a total of $703.26 million ($2022 present value terms) in incremental benefits (at a 7 per cent discount rate) to society. These benefits result from improvements in freight productivity, reliability and availability, and benefits to the community from crash reductions, reduced environmental externalities and road decongestion benefits.

Regional economic impact analysis

The Project will promote regional economic growth across the Darling Downs – Maranoa region. Over the construction stagestage, real GRP is projected to be $410 million higher than the baseline level for Darling Downs – Maranoa. The Project is also expected to deliver an additional 332 jobs (direct and indirect) per year over the construction period.

While the risks of labour shortages are high, the deterioration in the Darling Downs – Maranoa labour market observed in recent statistics indicates opportunities for recruiting, training and re-skilling available workforces in the region to supply a portion of the workforce requirements of the Project. However, in both a national and State context, the Project will be completed in a relatively tight labour market, particularly for specialist skilled jobs, which may impact the ability of the broader workforce to support the delivery of the Project.

If inflation in Australia and overseas necessitates Central Banks to aggressively increase interest rates, labour market conditions could deteriorate rapidly. The best estimates of prevailing trends in the Darling Downs – Maranoa labour market, and the ability of construction workers to mobilise to project locations, suggest that the risks of labour market disruption can be reduced.

Cumulative regional impact analysis

The incremental economic impacts of the northern sections of Inland Rail (Queensland sections and two New South Wales sections – Narrabri to North Star and North Start to Border) include an increase in real GDP of Australia of $1.5 billion (measured in 2022 dollars) and an increase in the average number of jobs over the period FY2023 to FY2030 of 548 jobs per year.

The regional impact analysis discussed in the previous section was based on simulations when the Project sections was modelled in isolation. In that context, the direct and indirect increment to jobs in the Darling Downs – Maranoa economy was estimated to be 332 jobs per year. When all the northern sections are considered jointly, the increment in jobs (direct and indirect) in Darling Downs – Maranoa decreases marginally to 326 jobs per year during the Project's Construction Works stage (FY2024 to FY2028). The increment to jobs in Darling Downs – Maranoa peaks in 2026 at 559 jobs. As discussed in the regional impact analysis in Section 5.4, the labour market conditions across regional economies in Queensland, over the Inland Rail construction period, are generally expected to be closer to a "tight" rather than "slack" characterisation. In a "tight" labour market, an increase in demand for labour is accommodated mainly through an increase in real wages while, in a "slack" labour market, an increase in labour demand is accommodated mainly by a decrease in the unemployment rate, with little impact on real wages.

The expansion in construction activity and regional employment is also likely to increase demand for a range of local infrastructure and services, including in the construction supply chain and for local retail and hospitality businesses.

Local and regional employment, business, and industry impacts

At a local level, the Project will support regional economic development through opportunities for local and regional employment, businesses, and industries:

- The Project offers opportunities to encourage, develop and grow Indigenous, local, and regional businesses through the supply of resources and materials for the construction and operation of the Project (e.g. borrow and ballast materials, fencing, electrical installation (excluding rail systems) and instrumentation, rehabilitation, landscaping and transportation);
- The Project offers opportunities in secondary service and supply industries (such as retail, hospitality, and other support services) for businesses near the construction footprint (including opportunities to supply to the three proposed non-resident workforce accommodation facilities in the vicinity of Turallin/ Millmerran, Inglewood, and Yelarbon and cleaning and maintenance of construction and accommodation facilities). The expansion in construction activity is also likely to support additional temporary flow-on demand and additional spending by the construction workforce in the local community; and
- As part of Inland Rail, the Project has the potential to stimulate business and industry development at the Toowoomba Enterprise Hub in Wellcamp. By providing efficient transport access to intrastate and interstate markets, the Project has the potential to act as a catalyst for further private-sector investment in this area, particularly for freight and logistics operations. The further development of the Toowoomba Enterprise Hub has the potential to unlock greater economic activity in the region, such as by promoting greater international export opportunities via Wellcamp Airport.

The Project alignment has been designed to minimise impacts on local business and industry, however, the Project may result in the disruption of the agriculture and tourism industries through:

- The loss of agricultural land (through disturbance, acquisition, or sterilisation by the permanent disturbance footprint), disruption to farm management, or changes in accessibility or connectivity to the market. This may negatively impact the productive capacity and total economic value added of the local agricultural

industry. Based on the proportion of productive agricultural land lost, it is estimated that the Project could result in a loss of $1.20 million (value foregone) in gross agricultural production per year;[89]

- ARTC will work with individual landowners to develop suitable management solutions based on individual farm management practices to mitigate and manage the direct impacts on individual farm properties; and
- Changes to the amenity of, or connectivity to, local landscape attractions. The Social Impact Assessment (Appendix X) concludes that a significant decrease in visitation as a result of this impact is unlikely. ARTC will work with tourism associations to ensure that generalised impacts on tourism values are reduced wherever possible.

Impact management

ARTC is committed to enhancing the economic benefits of the Project while avoiding, mitigating or managing any adverse economic impacts. Accordingly, there is a range of actions that ARTC will undertake to manage the social and socio-economic impacts of the Project and enhance Project benefits and opportunities.

[89] This value was estimated by calculating a proportion of the productive agricultural land impacted (productive land area disturbed within the Project footprint divided by total productive land in the Toowoomba and Goondiwindi LGAs) using the data contained in table titled Percentage *of land type within Toowoomba LGA traversed by the project footprint (outside of existing rail and road corridors)* in EIS Chapter 8: Land use and Tenure. The value of agricultural production in 2021-21 was multiplied by this proportion to understand the potential loss of agricultural value arising from the Project.

This value is an indicative estimate only - it does not consider the value of individual commodities produced per lot or the value-add activities which contribute to the gross value of agricultural production in the region. An assessment of the composition of agricultural production by lot and commodity may be undertaken following detailed design.

This value excluded land area which was already existing rail and road corridors.

APPENDIX

Y

Economic Impact Assessment

Appendix A Interacting projects

BORDER TO GOWRIE REVISED DRAFT ENVIRONMENTAL IMPACT STATEMENT

Inland Rail is a subsidiary of
Australian Rail Track Corporation

INLAND RAIL

Appendix A: Interacting projects

The projects deemed to have a relationship to the Project were selected according to the following conditions:

The Project:

a) is currently being assessed under Part 1 of Chapter 3 of the *Environmental Protection Act 1994 (Queensland)* (*EP Act*) and, as a minimum, have an initial advice statement (IAS) available on the Queensland Department of Environment and Heritage Protection (EHP) website;

b) has been declared a 'coordinated project' by the Coordinator-General under the *SDPWO Act* and an EIS is currently being prepared or is complete, or an IAS is available on the Queensland Department of State Development, Manufacturing, Infrastructure and Planning (DSDMIP) website;

c) may use resources located within the region (including materials, groundwater, road networks or workforces) that are the same as those to be used by the Project;

d) could potentially compound residual impacts that the Project may have on environmental or social values; and/or

e) is a development approved by Councils under the Goondiwindi Regional Council or Toowoomba Regional Council planning schemes.

In addition, ARTC reviewed the following documents, plans and investment programs to identify inter-related projects:

- *State government planning databases for State Development Areas and Priority Development Areas;*
- *Queensland Transport and Roads Investment Program;*
- *State Infrastructure Plan;*
- *Private Infrastructure Facilities in accordance with the State Development and Public Works Organisation Act 1971;*
- *Infrastructure Australia Infrastructure Priority List;*
- *Goondiwindi Regional Council Local Government Infrastructure Plan;*
- *Toowoomba Regional Council Local Government Infrastructure Plan;*
- *Queensland "Building our Regions" funded projects; and*
- *Community Infrastructure Designations under the repealed Sustainable Planning Act 2009.*

APPENDIX

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Economic Impact Assessment

Appendix B Regional economic assessment

BORDER TO GOWRIE REVISED DRAFT ENVIRONMENTAL IMPACT STATEMENT

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Appendix B: Regional economic assessment

Assumptions

The choice of exogenous variables determines the economic environment in which the Construction Works stage of the Project will be assessed. The Construction Works stage costs required to construct and develop the Project can be thought of as a temporary shock to the economy. That is, it is a one-off increase in investment expenditure.

The economic impacts of the Construction Works stage of the Project are directly related to the stimulus that is provided to the economy as a result of the expenditure for the construction of the Project. Analysis of the Construction Works stage of the Project is best undertaken in the context of an economic environment to recognise the temporary nature of the stimulus that this stage of the Project provides. The key exogenous variables include:

i. investment in fixed assets by the Darling Downs – Maranoa *Rail Freight* sector is imposed to reflect the Project CAPEX cost assumptions whilst investment in the remaining sectors responds to sector-specific rates of return;

ii. the Darling Downs – Maranoa *Rail Freight* sector's capital stock is assumed to be fixed at its baseline level while the capital stocks of the other sectors accumulate in line with sector-specific investment;

iii. the labour market specification assumes a trade-off between real wages and the rate of unemployment;

iv. the number of working-age people in the nation is held fixed at the number in the baseline;

v. tax rates and government policy settings are held fixed at their baseline values with budget balances free to vary;

vi. the average propensity to consume out of household disposable income is held fixed at its baseline value; and

vii. consumer preferences and technical change parameters are held fixed at their baseline values.

Model inputs

The numerical inputs (or shocks) that are imposed on KPMG-SD are designed to capture the direct impacts of the Construction Works stage of the Project on the economy. KPMG-SD then estimates the flow-on effects of these shocks on the economy. Over the Construction Works stage, total CAPEX costs are projected to be $2.2 billion (in 2021-22 prices),[90] spanning over 4-5 years. The estimated $2.2 billion CAPEX excludes the estimated CAPEX of $36.5 million for constructing of the Whetstone MDC.[91]

[90] CAPEX cost information is provided by ARTC. The amount used for this study includes direct costs, indirect costs, client costs and ATMS.

[91] The $36.5 CAPEX for constructing the Whetstone MDC represents 1.6 per cent of the total $2.2 billion CAPEX for the Project. As the economic modelling was done at a point in time prior to the inclusion of the Whetstone MDC in the EIS process, and the need for consistency in estimating the cumulative impacts across the Queensland , the additional $36.5 million CAPEX has been excluded from the modelling analysis. The minor update to CAPEX will not materially impact the results.

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Economic Impact Assessment

Appendix C CAPEX for the Queensland Inland Rail projects

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Appendix C: CAPEX for the Queensland Inland Rail Projects

This appendix has been included to outline the CAPEX costs across the Queensland Inland Rail Projects. These costs will be incurred over the Construction Works stage and have been derived from the capital cost plan and construction programming provided to KPMG by ARTC. These have been used to model the cash injection into the economy from the Project. The CAPEX costs for the five Queensland Inland Rail Projects are outlined in the table below.[92]

Total CAPEX for Queensland Inland Rail Projects

Inland Rail Project	$2019-20 [a]	$2021-22 [b]
NSW / Qld Border to Gowrie	$2,056,327,774	$2,231,932,195
Gowrie to Helidon	$2,191,408,196	$2,378,548,093
Helidon to Calvert	$1,186,742,318	$1,288,086,666
Calvert to Kagaru	$1,241,066,050	$1,347,049,487
Kagaru to Acacia Ridge and Bromelton	$169,762,350	$184,259,562
Total	**$6,854,306,688**	**$7,429,876,004**

a) The construction and development figures outlined are incurred over the Construction Works stage which has been derived from the capital cost plan and construction programming provided to KPMG by ARTC.
b) Conversion to 2021-22 dollars based on the Producer Price Index growth from March 2020 to March 2022. The Producer Price Index used relates to the output of the Heavy and Civil Engineering Construction industry specifically (ABS 6427.0 Producer Price Indexes, Australia, Table 17).

[92] The $36.5 CAPEX for constructing the Whetstone MDC represents 1.6 per cent of the total $2.2 billion CAPEX for the Project. As the economic modelling was done at a point in time prior to the inclusion of the Whetstone MDC in the EIS process, and the need for consistency in estimating the cumulative impacts across the Queensland , the additional $36.5 million CAPEX has been excluded from the modelling analysis. The minor update to CAPEX will not materially impact the results.

APPENDIX

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Economic Impact Assessment

Appendix D Treatment of coal

BORDER TO GOWRIE REVISED DRAFT ENVIRONMENTAL IMPACT STATEMENT

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Appendix D: Treatment of Coal

Note regarding the treatment of coal demand for the Inland Rail EIS

This note has been developed to document KPMG's assumption relating to the treatment of coal demand within the benefits assessment developed for the Inland Rail EIS.

For the purposes of the economic benefit assessments contained within the Inland Rail EIS, freight movements from coal demand have been excluded. This approach is consistent with the CBA completed for the ARTC *Inland Rail Programme Business Case (2015)*. With specific reference to the CBA results for the scenarios **"No Western Line Upgrade"** (refer to the table below, extracted from the *Inland Rail Programme Business Case (2015)* Chapter 9. Economic Analysis), where coal benefits are equal to zero.

Cost benefit analysis results for Inland Rail by beneficiary (incremental to the base case, discounted 2014-15 dollars)

BENEFICIARY (PV $ MILLIONS)	INCLUDING WESTERN LINE UPGRADE*		NO WESTERN LINE UPGRADE	
	PV AT 4% DISCOUNT RATE ($M)	PV AT 7% DISCOUNT RATE ($M)	PV AT 4% DISCOUNT RATE ($M)	PV AT 7% DISCOUNT RATE ($M)
COSTS				
Capital costs	7650	6590	7607	6553.8
Operating costs	133	66	133	65.6
Maintenance costs	793	380	775	371.4
Total costs	**8575**	**7036**	**8515**	**6991**
BENEFITS				
1) Intercapital/intermodal freight	**15 361**	**4666**	**15 862**	**4716**
Melbourne to Brisbane	12 222	3697	12 621	3737
Brisbane to Adelaide	1278	389	1320	393
Brisbane to Perth	1860	579	1921	585
2) Regional freight	**3524**	**1271**	**1995**	**693**
Coal	1592	585	0	0
Agricultural products	1850	658	1910	665
Others (including steel, minerals, general freight, and other extra-corridor)	82	28	84	28
3) Community	**2821**	**879**	**3126**	**962**
4) Passengers	**50**	**16**	**52**	**16**
5) Rail network owners (ARTC & QR)	**747**	**321**	**772**	**324**
Total benefits	**22 503**	**7152**	**21 806**	**6711**
Net present value of costs and benefits	**13 928**	**116**	**13 291**	**(280)**
Benefit cost ratio	**2.62**	**1.02**	**2.56**	**0.96**

Source: Inland Rail Programme Business Case (2015)

On this basis, it is the understanding of KPMG that, in the absence of the Western Line upgrade to the existing Queensland Rail network[93], no benefits are expected to accrue to coal movements as a result of the delivery of Inland Rail. These results imply that, under this scenario, there is no net benefit to coal trips traversing any of the new sections to be delivered as part of Inland Rail. For example, as a stand-alone project, the Project is not expected to generate net benefits to coal freight.

Furthermore, the above table highlights that the identified benefits accruing to coal trips are a direct result of Inland Rail with complementary investment in Western Line upgrades, which do not form part of the scope of Inland Rail as it stands currently and are not funded.

On this basis, KPMG has ensured consistency with the assumptions contained within the ARTC *Inland Rail Programme Business Case (2015)* which indicates there are no net benefits to coal freight movements under the "No Western Line Upgrade" scenario.

Any further consideration of potential benefits that may be expected to accrue to coal movements as a result of the Project would require additional validation of the demand assessment undertaken as part of the business case.

[93] Referred to as "complementary investment on the QR network (Western Line and Brisbane metropolitan network) to enable coal train lengths to increase from 650 metres to 1,010 metres".