

Central Queensland Coal Project

Chapter 19 – Social and Economic

Environmental Impact Statement





Central Queensland Coal Project
Chapter 19 - Social and Economic

24 October 2017

CDM Smith Australia Pty Ltd
ABN 88 152 082 936
Level 4, 51 Alfred Street
Fortitude Valley QLD
Tel: 4006
Fax: +61 7 3828 6900



Table of Contents

19	Existing Social and Economic Environment	19-1
19.1	Project Overview.....	19-1
19.2	Legislation and Guidance	19-2
19.2.1	Planning Act 2016	19-2
19.2.2	Queensland State Planning Policy.....	19-2
19.2.3	Environmental Protection Act 1994 (EP Act).....	19-3
19.2.4	Social Impact Assessment Guidelines	19-3
19.2.5	Resources and Energy Sector Code of Practice for Local Content 2013	19-3
19.2.6	Regional Planning Interests Act 2014.....	19-4
19.2.7	Relevant Programs and Plans	19-4
19.3	Environmental Objectives and Performance Outcomes	19-5
19.3.1	Environmental Objectives	19-5
19.3.2	Performance Outcomes	19-5
19.4	Assessment Methodology	19-6
19.4.1	Social Impact Assessment.....	19-6
19.4.2	Economic Impact Assessment	19-7
19.5	Existing Social Environment.....	19-10
19.5.1	Relevant Stakeholders.....	19-11
19.5.2	Community Profiles.....	19-11
19.5.3	Mining Projects.....	19-15
19.5.4	Demographics	19-16
19.5.5	Housing and Accommodation.....	19-20
19.5.6	Education	19-21
19.5.7	Cultural and Ethnic Characteristics.....	19-22
19.5.8	Community Services and Facilities.....	19-22
19.5.9	Law and Order	19-24
19.5.10	Disaster Management.....	19-25
19.6	Existing Economic Environment.....	19-26
19.6.1	Size and Structure of the Existing Economy.....	19-26
19.6.2	Industry Analysis.....	19-28
19.6.3	Development Pipeline	19-31
19.6.4	Agricultural Production.....	19-34
19.6.5	Socio-Economic Index for Areas.....	19-35
19.6.6	Value of Ecosystem Services.....	19-36
19.7	Potential Impacts	19-36
19.7.1	Social Impacts	19-36
19.7.2	Economic Impacts	19-38
19.7.3	Summary of Beneficial and Adverse Impacts	19-43
19.8	Mitigation Measures	19-44
19.8.1	Potential Localised Inflation.....	19-45
19.8.2	Increased Labour Costs	19-45
19.8.3	Local and Regional Infrastructure	19-45
19.8.4	Management Strategies	19-45
19.9	Dispute Resolution.....	19-50
19.10	Qualitative Risk Assessment.....	19-52
19.11	Conclusion.....	19-57
19.12	Commitments	19-58
19.13	ToR Cross-reference Table	19-59

List of Figures

Figure 19-1 Study area for the economic assessment	19-8
Figure 19-2 Local Government boundaries.....	19-12
Figure 19-3 Regional Development Australia boundaries	19-14
Figure 19-4 Current mining and resource projects near the Project site	19-15
Figure 19-5 Population pyramid Livingstone (S) LGA and Queensland as at 30 June 2015	19-17
Figure 19-6 Population pyramid Rockhampton (R) LGA and Queensland as at 30 June 2015	19-18
Figure 19-7 Location of offences in Rockhampton / Livingstone area, 1 July - 31 Dec 2015.....	19-25
Figure 19-8 Location of offences in Rockhampton / Livingstone area, 1 Jan - 30 June 2016	19-25
Figure 19-9 Unemployment rate in Livingstone Shire, Fitzroy SA4 and Queensland	19-28
Figure 19-10 Employment by occupation type in Livingstone Shire, Fitzroy SA4 and Queensland, 2011 ...	19-30

List of Tables

Table 19-1 Measures of economic impact.....	19-9
Table 19-2 Estimated resident population.....	19-16
Table 19-3 Indigenous population (regional, state, national) as at 2016 census	19-18
Table 19-4 Projected population	19-19
Table 19-5 Median age	19-19
Table 19-6 Place of usual residence in 2006 compared to 2011	19-19
Table 19-7 Household composition as at 2016 census.....	19-20
Table 19-8 Median incomes v mortgage repayment as at 2016 census.....	19-20
Table 19-9 Median weekly rent based on three bedroom house (2014 – 2016)	19-21
Table 19-10 Historical trends in land valuations for LGAs (2012-2016).....	19-21
Table 19-11 Highest level of education as at 2016 ¹ or 2011 ² census	19-21
Table 19-12 Country of birth and English proficiency as at 2011 census	19-22
Table 19-13 Community Services and Facilities as at 30 June 2016	19-22
Table 19-14 Reported offences for 2015/16 period	19-24
Table 19-15 Population projections, Livingstone Shire, Fitzroy SA4 and Queensland, 2016-2036	19-27
Table 19-16 Nominal Gross Regional Product by industry for Fitzroy SA4 and Queensland.....	19-27
Table 19-17 Employment by industry for Livingstone Shire, SA4 and Queensland, 2011.....	19-29
Table 19-18 Total businesses by industry section, regional comparison, 2017.....	19-31
Table 19-19 Development pipeline within Fitzroy SA4.....	19-32
Table 19-20 Population by index of relative socio-economic disadvantage as at 2011 census	19-35
Table 19-21 Extent of regional ecosystem impact.....	19-42
Table 19-22 Community and Stakeholder Engagement Strategy framework	19-46
Table 19-23 Workforce Management Strategy framework.....	19-47
Table 19-24 Local Business and Industry Content Strategy	19-48
Table 19-25 Health, Social, Family and Community Wellbeing Strategy	19-50
Table 19-26 Qualitative risk assessment.....	19-53
Table 19-27 Commitments – social and economic	19-58
Table 19-28 ToR Cross-reference Table	19-59

19 Existing Social and Economic Environment

The following chapter summaries the existing social and economic environment most relevant to the Project site. The summary includes methods of assessment, relevant regulatory framework, existing social environment including community profiles and demography, existing economic environment including an economic baseline assessment, potential beneficial and adverse impacts, and proposed mitigation measures to minimise social and economic impacts to the region and more broadly. This chapter has been supported by a technical economic assessment report, provided in Appendix A10a – Economic Technical Report. Note that Appendix A10a – Economic Technical Report references the original proponent; Styx Coal Pty Ltd, and the original Project name, Styx Coal Mine Project; however, the Central Queensland Coal Pty Ltd is the new Proponent for the Project and the Project has been renamed as Central Queensland Coal Project to better reflect the change of Proponent. This proponent and title change does not affect the technical studies.

19.1 Project Overview

The Project is located 130 km northwest of Rockhampton in the Styx Coal Basin in Central Queensland. The Project will be located within Mining Lease (ML) 80187 and ML 700022, which are adjacent to Mineral Development Licence (MDL) 468 and Exploration Permit for Coal (EPC) 1029, both of which are held by the Proponent.

The Project will involve mining a maximum combined tonnage of up to 10 million tonnes per annum (Mtpa) of semi-soft coking coal (SSCC) and high grade thermal coal (HGTC). Development of the Project is expected to commence in 2018 and extend for approximately 20 years until the current reserve is depleted.

The Project consists of three open cut operations that will be mined using a truck and shovel methodology. The run-of-mine (ROM) coal will ramp up to approximately 2 Mtpa during Stage 1 (Year 1-4), where coal will be crushed, screened and washed to SSCC grade with an estimate 80% yield. Stage 2 of the Project (Year 4-20) will include further processing of up to an additional 4 Mtpa ROM coal within another coal handling and preparation plant (CHPP) to SSCC and up to 4 Mtpa of HGTC with an estimated 95% yield. At full production two CHPPs, one servicing Open Cut 1 and the other servicing Open Cut 2 and 4, will be in operation.

A new train loadout facility (TLF) will be developed to connect into the existing Queensland Rail North Coast Rail Line. This connection will allow the product coal to be transported to the established coal loading infrastructure at the Dalrymple Bay Coal Terminal (DBCT).

The Project is located within the Livingstone Shire Council (LSC) Local Government Area (LGA). The Project is generally located on the “Mamelon” property, described as real property Lot 11 on MC23, Lot 10 on MC493 and Lot 9 on MC496. The TLF is located on the “Strathmuir” property, described as real property Lot 9 on MC230. A small section of the haul road to the TLF is located on the “Brussels” property described as real property Lot 85 on SP164785.

19.2 Legislation and Guidance

Whilst there is no specific Commonwealth and State legislative requirements relating to the social and economic environment, the following documents are relevant when considering the social and economic impacts to the region because of the Project:

- *Planning Act 2016*;
- Queensland State Planning Policy (SPP);
- *Environmental Protection Act 1994*;
- Social Impact Assessment Guideline 2013 (Department of State Development, Infrastructure and Planning);
- *Queensland Resources and Energy Sector Code of Practice for Local Content 2013*; and
- *Regional Planning Interests Act 2014*.

19.2.1 Planning Act 2016

As of 3 July 2017, the *Planning Act 2016* replaced the SP Act. The new Act is Queensland's principal planning legislation and comprises of three main elements: plan making, development assessment and dispute resolution. In comparison to the SP Act, the *Planning Act 2016* is very similar. The Act still has the Queensland State Planning Policies (SPP) which is provided in more detail below. Under the SPP sits the various regional plans and schemes, which are covered in Section 19.2.7.

19.2.2 Queensland State Planning Policy

The most recently revised State Planning Policy (SPP) commenced on 3 July 2017, and has been developed to provide a comprehensive set of principles to guide state government and local government in the planning of land use and development (DILGP 2017).

The SPP includes 17 state interests under five broad themes, with the most relevant interests in the assessment of the social and economic environment for this Project being:

- Liveable communities - planning delivers liveable, well-designed and serviced communities that support wellbeing and enhance quality of life;
- Economic growth through mining and extractive resources - support the productive use of resources, a strong mining and resource industry, economical supply of construction materials, and avoidance of land use conflicts wherever possible;
- Economic growth through development - planning supports employment needs and economic growth by facilitating a range of residential, commercial, retail and industrial development opportunities;
- Economic growth through tourism – social, cultural and natural values underpinning the tourism developments are protected to maximise economic growth;
- Safety and resilience to hazards through emissions and hazardous activities – community health and safety, sensitive land uses and the natural environment are protected from potential adverse impacts, whilst ensuring the long-term viability of industrial development; and
- Infrastructure through strategic airports and ports; planning enables the growth and development of Queensland's aviation industry and strategic ports.

19.2.3 Environmental Protection Act 1994 (EP Act)

The object of the *Environmental Protection Act 1994* (EP Act) is to protect Queensland's environment while allowing for development that improves the total quality of life and maintains ecological processes. As per Section 8 (d) of the EP Act, environment includes 'the social, economic, aesthetic and cultural conditions' that affect or are affected by other components of the environment (Queensland Legislation 2017a), and as such bear relevance in this chapter. Additionally, Environmental Impact Statements (EIS) prepared under the EP Act are required to assess the potential adverse and beneficial environmental, economic and social impacts of the Project to effectively propose environmental management measures (s40). In accordance with the EP Act, social and economic objectives have been set out in the ToR for the Project which requires the development to:

- In accordance with the Social Impact Assessment Guideline 2013, describe the likely social impacts (positive and negative) on affected communities considering proposed mitigation measures;
- Describe the likely impacts (positive and negative) on the economies materially impacted by the Project, both potential and direct economic impacts including estimated costs on industry and the community; and
- Identify opportunities to capture the economic benefits of the Project for local suppliers, local workers (including members of Indigenous communities and people with a disability), agricultural and tourism industries, local recruitment and training providers, and for those workers and their families who are relocating or for fly-in-fly-out (FIFO) workers.

19.2.4 Social Impact Assessment Guidelines

The Queensland Government *Social Impact Assessment Guideline 2013* and the *Draft Social Impact Assessment Guideline 2016* apply to projects assessed under the EP Act, and complements the streamlined environmental impact assessment process. The purpose of the Guideline is to assist proponents in assessing the social aspect of their projects, using a risk-based approach to social impact assessment. Further, the Guidelines promote a focus on outcomes which encourage innovative solutions which capitalise on social opportunities and mitigate detrimental impacts of a project (DSD 2013).

Regarding the core principles of the Guidelines, they should be used to assess social impacts (beneficial and detrimental), as well as identifying strategies to capitalise on social opportunities which act to mitigate the predicted impacts. The Guidelines also highlight the need for communities of interest to be meaningfully engaged during development, which recognises local knowledge, experience, customs and values, across the project lifecycle (DSD 2013).

The ToR for the Project requires that the assessment be completed in accordance with these Guidelines, and as such the core principles outlined in the Guidelines were taken to be the core principles for this assessment.

19.2.5 Resources and Energy Sector Code of Practice for Local Content 2013

The *Queensland Resources and Energy Sector Code of Practice for Local Content 2013* (the Code) is referred to in the ToR as a guiding policy document when developing strategies to ensure local suppliers of goods and services receive full, fair and reasonable opportunity to tender for work throughout the Project lifecycle. Whilst compliance with the Code is voluntary, its use as a guiding

policy is strongly encouraged by key industry peak body Queensland Resources Council (QRC 2017). More specifically related to this chapter, successful implementation of this policy can achieve broader social and economic benefits of:

- Employment and business growth in Queensland and the region;
- Long-term sustainability of local economies; and
- Achieving a consistently renewed social licence to operate.

19.2.6 Regional Planning Interests Act 2014

The *Regional Planning Interests Act 2014* was introduced by the Queensland Government to protect areas of regional interest from inappropriate development, and assist with resolving land use conflict between activities contributing to the Queensland economy (DILGP 2015). The Project site will be considered an area of regional interest if defined as either a; priority agricultural area; priority living area; strategic cropping area; or strategic environmental area, which contributes or will likely contribute to Queensland's economic, social and environmental prosperity.

The Project activities are not located within any mapped area of regional interest; however, a small portion of strategic cropping area is mapped in the north-eastern portion of the Mine Lease (ML).

19.2.7 Relevant Programs and Plans

The Queensland Government has developed statutory regional plans for the individual Queensland regions, with the aim of providing overarching strategic direction to achieve regional outcomes that align with the state's interest in planning and development as set out in the SPP (DILGP 2016).

19.2.7.1 Central Queensland Regional Plan

The Central Queensland Regional Plan (DILGP 2016) includes two of the three community profiles to be assessed further in this chapter regarding existing social and economic environment – LSC and Rockhampton Regional Council (RRC). Based on consultation with the Regional Planning Committee, local government, industry / community stakeholder and state agencies, the following regional policies were identified as most relevant to the region:

- Maximise the productive use of key mining resources;
- Provide for liveable communities; and
- Support the long-term viability and growth of the agricultural sector.

The local government planning schemes are designed to integrate the economic, social and environmental needs of the local community through focusing on land use, development, infrastructure and valuable features of the area (DILGP 2016).

19.2.7.2 Livingstone Planning Scheme 2009

The latest version of the Livingstone Planning Scheme is dated 2009, with a primary focus on guiding the way land, buildings and structures are used and developed in the area (Livingstone Shire Council 2017a).

The LSC has drafted a new plan, which went through a public consultation period between November 2016 and January 2017, and awaiting further progress updates.

19.2.7.3 Rockhampton Region Planning Scheme 2015

The Rockhampton Region Planning Scheme is a revised planning scheme for the area, replacing and consolidating the individual Fitzroy Shire, Mount Morgan Shire and Rockhampton City Planning Schemes. The Planning Scheme has been developed into an online planning and development service (Rockhampton Regional Council 2017a).

19.2.7.4 Livingstone Shire Council Corporate Plan 2014 – 2019

The Livingstone Shire Council Corporate Plan 2014 – 2019 (the Corporate Plan) is the long-term planning document that guides the council's allocation of resources and services to the community. The Corporate Plan is the principal document from which the Council's plans and strategic document are developed (Livingstone Shire Council 2017b). The Corporate Plan covers the following key aspects:

- Assets;
- Environment;
- Economy;
- Community; and
- Governance.

19.3 Environmental Objectives and Performance Outcomes

19.3.1 Environmental Objectives

The environmental objectives relevant to the social and economic environment are to:

- Avoid or mitigate adverse social and economic impacts arising from the Project; and
- Capitalise on opportunities potentially available to affected communities.

19.3.2 Performance Outcomes

The social and economic performance outcomes are:

- Operations and activities minimise adverse impacts to the social and economic environment of the region and maximise benefits that the operations may bring;
- Use local workers and contractors, where appropriate; and
- Procure local and regional businesses and services, where possible.

19.4 Assessment Methodology

19.4.1 Social Impact Assessment

19.4.1.1 Overview

The methodology used in assessing the social impacts to the region has been based on the International Association for Impact Assessment *Guidance for assessing and managing the social impacts of projects* (Vanclay et al 2015). A summary of the assessment includes:

- Review submissions to the Project EIS draft Terms of Reference (ToR);
- Identify the study areas;
- Develop desktop community profile;
- Constructing social baseline relevant for decision-making and documenting social changes; and
- Review other technical reports for the Project.

The following qualitative and quantitative data sources were used:

- Australian Bureau of Statistics (ABS) used to generate baseline local profile data;
- Queensland Government Statistician's Office (QGSO) used to generate regional locality data;
- Reports and plans from LSC and RRC;
- Reports and plans from Regional Development Australia (Fitzroy and Central West, and Mackay-Isaac-Whitsunday);
- Reports and plans from Queensland State Government;
- Property market reports from Department of Natural Resources and Mines (DNRM) and Residential Tenancies Authority (RTA);
- Regional reports from Department of State Development (DSD), and Department of Transport and Main Road (DTMR); and
- Reports on available services in the region (various).

19.4.1.2 Assumption and Limitations

The assessment has been based on the following assumptions:

- Construction Phase expected to commence in Q1 2018 for a period of approximately six months and employ up to 200 employees;
- Operations Phase expected to commence in Q2 2018 and employ up to 250 employees, and 500 employees at maximum output; and
- Decommissioning expected 20-25 years after commencement of operations phase, when the current reserve is depleted.

The following limitations during the Project lifecycle were also considered as part of this assessment:

- The workforce profile will change in alignment with the change in social and economic conditions;
- Unforeseen Commonwealth or State legislative changes, the outcomes of which directly impact the Project and / or local economy;
- Property and land valuations near mining towns are particularly sensitive to price fluctuations based on global markets;
- Floods and cyclones are prevalent in the region, and the associated environmental and economic impacts; and
- Progress of international agreements such as the Trans-Pacific Partnership which is currently uncertain.

19.4.1.3 Study Areas

The study area is defined as:

- Local Government Areas (LGA):
 - Livingstone Shire Council (S)
 - Rockhampton Regional Council (R); and
- Regional Development Australia Areas (RDA):
 - Fitzroy and Central West Region (RDAFCW)
 - Mackay-Isaac-Whitsunday (RDAMIW).

For statistical purposes, an LGA is defined as a non-ABS structure and represents an administrative region, which in this case are the Council boundaries. Each LGA covers incorporated areas of Australia, and each one has an official status. In Queensland, (S) refers to a Shire, and (R) refers to a Regional Council.

The RDAs are also defined as non-ABS structures representing an administrative region, whilst the State of Queensland and Australia are defined as ABS structures which are defined and maintained by the ABS (ABS 2017).

19.4.2 Economic Impact Assessment

19.4.2.1 Study Area

The economic assessment used local (Livingstone Shire) and regional (Fitzroy SA4) data to establish an overview of the existing economic environment and to assess the Project's anticipated economic contribution and impacts. The economic impact assessment study area has been based on the Project location along with the consideration of likely primary sources of labour, goods and services that will be utilised by the Project. The study area represents the regional economy most likely to be either directly or indirectly affected by the Project. The study area for the economic assessment is illustrated in Figure 19-1.

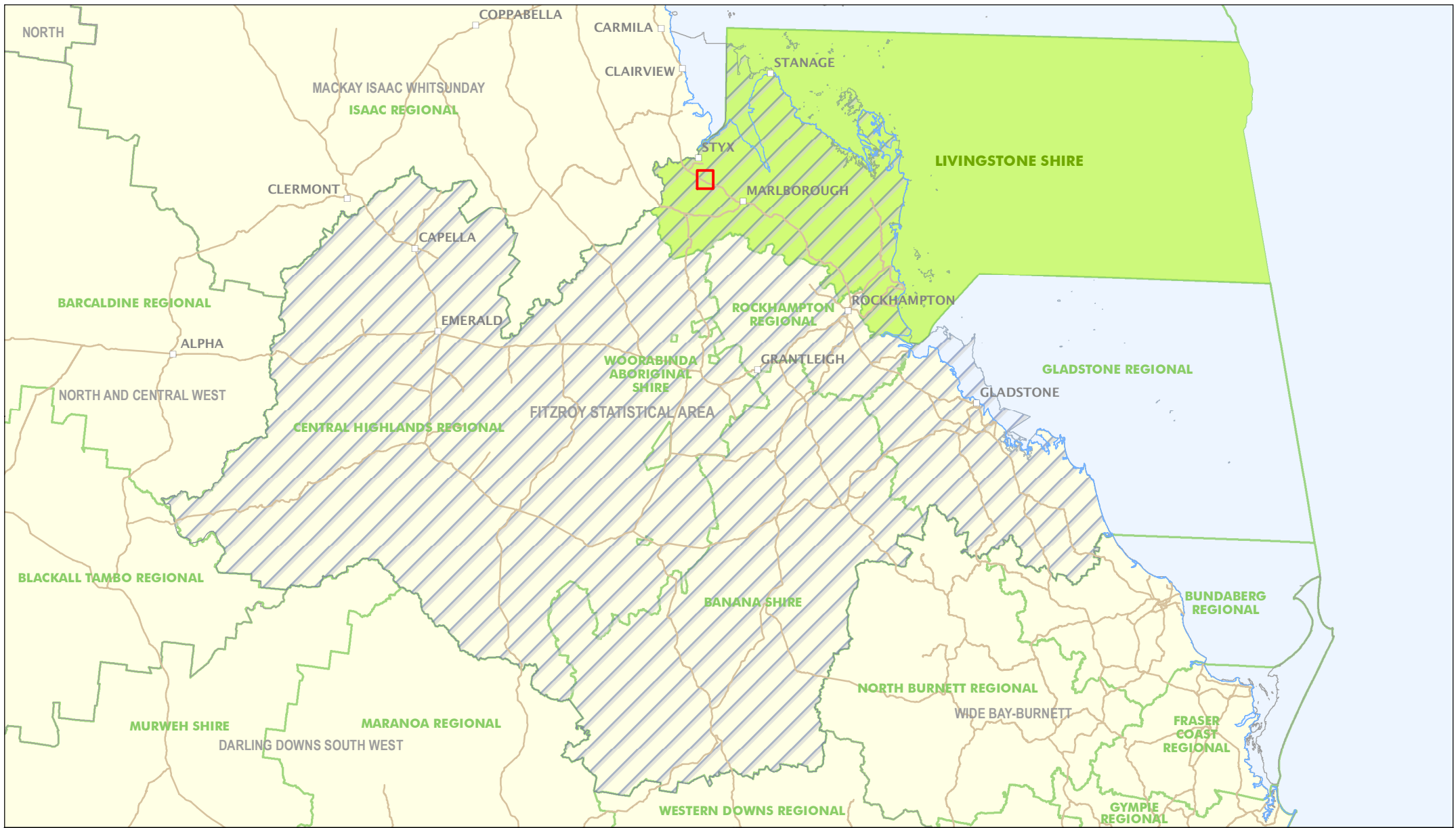


Figure 19-1
Study area for the economic assessment



0 20 40 km

Scale @ A4 1:3,000,000
Date: 28/06/17
Drawn: Gayle B.

Legend

- Project Area
- Australian Census Data**
- Fitzroy Statistical Area Level 4 (SA4)

- Local Government Area**
- Livingstone Shire
- Surrounding LGA boundaries
- Main road

DATA SOURCE
QLD Spatial Catalogue (QSpatial), 2017
Australian Bureau of Statistics, 2011



19.4.2.2 Existing Economic Environment

The existing economic assessment (also referred to as the baseline assessment) provides a baseline to assess the significance of potential impacts. The baseline assessment used data from the following sources:

- Various Australian Bureau of Statistics (ABS) catalogues, including the Census of Population and Housing, Labour Force Survey, Regional Population Growth, Australian Business Register and Agricultural Commodities publications;
- Office of Economic and Statistical Research;
- Various local and Queensland Government agencies; and
- Proprietary Economic Associates models.

19.4.2.3 Economic Impact Assessment

The economic contribution and impact assessment utilised a regional input-output approach. This approach provides indicative results relating to the total demand generated by the Project during both the construction and operational phases in terms of:

- Output;
- Household incomes;
- Employment; and
- Value added.

These four different measures of economic impact are discussed in Table 19-1.

Table 19-1 Measures of economic impact

Impact Measure	Description
Output	The output impact measures the increase in gross sales throughout the entire economy by aggregating all individual transactions (direct and indirect) resulting from the economic stimulus. The output impact provides an indication of the degree of structural dependence between sectors of the economy. However, output impacts are regarded as overstating the impact on the economy as they count all goods and services used in one stage of production as an input to later stages of production, hence counting their contribution more than once.
Household Incomes	The household income impact measures the additional wages, salaries and supplements paid to households associated with the industry under consideration and with other industries benefiting from the stimulus to the economy.
Employment	The employment impact measures the number of full-time equivalent (FTE) positions for one year created directly and indirectly by the stimulus ¹ . However, the short-term response to increased demand may be that existing employees work overtime. Consequently, actual levels of employment generated (in terms of persons employed) will tend to be lower than those estimated by the input-output analysis. This short-term employment response (of working additional overtime) will be more prevalent where the demand stimulus is likely to be temporary and short lived, or where there is limited spare capacity in the economy (that is, when the economy is at or near full employment).

¹Therefore, if impacts are to be spread over a number of years, the FTE estimate (which relates to the annual equivalent) should be divided by the number of years over which the impact will be spread (in the absence of a clearly defined staging program) to provide an indicative ongoing employment estimate over the life of the impact.

Impact Measure	Description
Value Added	The value added or Gross Regional Product (GRP) impact measures only the net activity at each stage of production resulting from a stimulus. GRP is defined as the addition of consumption, investment and government expenditure, plus net exports (exports minus imports) from a region. The value added (or GRP) impact is the preferred measure for the assessment of contribution to the economy from a stimulus or impact, and as such should be used to describe the net impact of the event. Value added is the measure of economic impact resulting from a stimulus that is preferred by economists.

Source: Jensen, R. & West, G. (2001) Community Economic Analysis, Department of Primary Industries: Brisbane, Qld

The total economic impact of a stimulus or activity comprises the following effects:

- Direct or initial effect, being the stimulus for the economic impact. This is typically described as the change in sales or contribution to final demand by the stimulus or activity; and
- Flow on effects, comprising production induced effects and consumption induced effects, these being:
 - First round production effects: purchases of inputs required from other industry sectors in the economy to produce the additional output generated by the stimulus or activity;
 - Industrial support production effects: second, third and subsequent round industrial flow on effects stimulated by the purchases made in the first round; and
 - Consumption induced effects: purchases made by households upon receiving additional income from labour payments stemming from the production of additional output generated by the stimulus or activity under assessment.

The extent of these impacts can be represented by multipliers calculated in aggregate for various regional, state or national economies. As stated above, there are commonly four multipliers used to measure impact, being output, household income, employment and value added.

Two sets of the above multipliers can be generated, namely:

- Type 1 Multipliers, which estimate the direct and production induced impacts of a stimulus or activity; and
- Type 2 Multipliers, which estimate the direct, production induced and consumption induced impacts of a stimulus or activity.

Type 1 Multipliers are used in the analysis of this Project. Queensland Treasury's preference is for use of only Type 1 Multipliers, given that Type 2 Multipliers typically overstate the extent of consumption-induced impacts of any given stimulus or activity.

The regional input-output approach has limitations, which may result in overestimation of impacts. Please see Appendix A10a – Economic Technical Report for limitations of the input-output approach.

19.5 Existing Social Environment

The following section details the most relevant regional community profiles (refer to Appendix A10b – Queensland Regional Profiles – Rockhampton and Livingstone LGA), provides a comparison of the demography for the separate regions, Queensland and Australia, and provides trend information on other integral aspects in the community.

19.5.1 Relevant Stakeholders

The Project stakeholders are relevant individuals, communities, government agencies (local, State and Federal), politicians, industry (private, non-Government), associations, and not-for-profit organisations (community / interest groups) who have an interest or stake in the Project and its outcome. It is also worth noting that individual stakeholders and groups will have varying degrees of interest and influence over the Project, and at different stages in the lifecycle.

The Project stakeholders include:

- Local community - community members near the Project site and surrounding regions where labour and infrastructure will be utilised;
- Landholders – affected landholders near the Project site;
- Local Government – LSC and RRC;
- Regional Government - Regional Development Australia Fitzroy and Central West (RDAFCW), and Regional Development Australia Mackay-Isaac-Whitsunday (RDAMIW);
- Commonwealth and Queensland State Governments - including natural resources and mining, transport, environment, emergency, and state development;
- Local industry – supply chain support, accommodation, tourism etc.;
- Aboriginal groups and corporations –Barada Kabalbara Yetimarala People and Darumbal People and Darumbal Aboriginal Corporation (ORIC 2017);
- Associations - including peak bodies and unions;
- Not-for-profit organisations - including environmental lobby groups; and
- Local services – employment, housing etc.

19.5.2 Community Profiles

The relevant community profiles researched for this Project have been segmented into the LSC (local council area) and RRC (surrounding local council area). The surrounding local council area has been included as it is anticipated that support will be sourced from this area in relation to major infrastructure including airports, supply chain support, and to source locally skilled workers. The council areas relevant to the Project are shown in Figure 19-2.

There is another nearby council area, Woorabinda Aboriginal Shire Council, which is located 170 km southwest of Rockhampton and covering an area of 391.2 km². The Shire only has a small population of approximately 970, and no notable support infrastructure (Woorabinda 2011). As such, this community profile will not be assessed in detail.

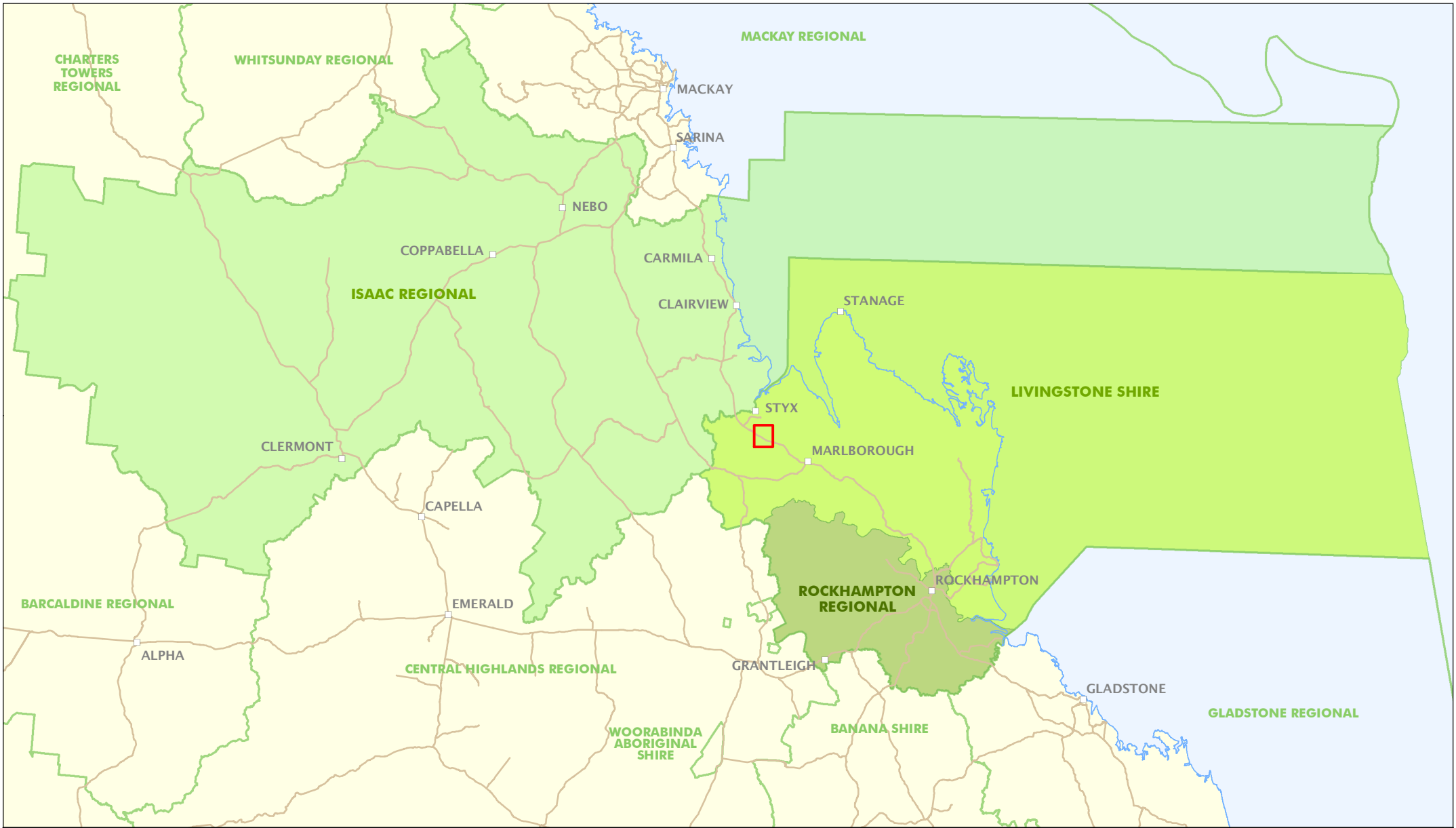


Figure 19-2
Local Government boundaries



0 20 40 km

Legend

Study Areas

- Livingstone Shire Council
- Rockhampton Shire Council
- Isaac Regional Council

- Project Area
- Surrounding LGA boundaries
- Main road

Scale @ A4 1:2,550,000
Date: 29/06/17
Drawn: Gayle B.

DATA SOURCE
QLD Spatial Catalogue (QSpatial), 2017



19.5.2.1 Livingstone Shire Regional Council

The Project is located near the township of Ogmore, which is in the LSC Local Government Area. The Livingstone Shire is located within the Fitzroy Region of Central Queensland, covering 11,784 km², and home to close to 37,450 residents (QGSO 2017a). The Shire is made up of the townships of Byfield, Cawarral, Emu Park, Farnborough, Keppel Sands, Marlborough, Ogmore, Stanage Bay, The Caves, and Yeppoon (Livingstone Shire Council 2017b). The council sits within the Regional Development Australia Fitzroy and Central West region (RDAFCW 2017).

19.5.2.2 Rockhampton Regional Council

The Project site is also near the RRC boundaries, located in Central Queensland and 600 km north of Brisbane, and with an estimated resident population of 83,309 (QGSO 2017b, RRC 2017b). The council consists of the main townships of Bajool, Bouldercombe, Glenlee, Gracemere, Mount Morgan, North Rockhampton, and Rockhampton (RDAFCW 2017). The council sits within the Regional Development Australia Fitzroy and Central West region (RDAFCW 2017).

19.5.2.3 Regional Development Australia

Fitzroy and Central West Region

Regional Development Australia Fitzroy and Central West Region (RDAFCW) is a regional association developed through a partnership between the Australian Government and a group of local governments in the region. LSC and RRC are two of the twelve regional councils that make up the RDAFCW region. The aim of the RDAFCW is to support the growth and development of the region through creating and nourishing relationships with governments, regional development associations, local businesses, community groups and other key regional stakeholders (RDAFCW 2017).

Mackay-Isaac-Whitsunday Region

Regional Development Australia Mackay-Isaac-Whitsunday (RDAMIW) is comprised of these three large councils. Whilst this regional association has the same aims as RDAFCW, this region differs in the environment which boasts one of Australia's most naturally beautiful regions, the Great Barrier Reef, thus attracting the economic benefits of the tourism industry (RDAMIW 2017).

The RDA boundaries relative to the Project site are presented in Figure 19-3.



Figure 19-3
Regional Development Australia boundaries

Legend

- Project Area
- Main road

Study Areas

- Fitzroy and Central West RDA
- Mackay-Isaac-Whitsunday RDA

Scale @ A4 1:2,550,000
 Date: 21/07/17
 Drawn: Gayle B.

DATA SOURCE
QLD Spatial Catalogue (QSpatial), 2017



The Northern Queensland Strategy

The RDAFCW and RDAMIW make up one half of four RDAs in Northern Queensland who have taken a consolidated approach to the development of strategic initiatives specific to their section of Australia. The Final Report of the Northern Queensland Strategy was released in June 2014, and the main three recommendations focus on funding infrastructure to support economic growth. The main three recommendations are:

- Governments support funding to upgrade Northern Queensland roads to support freight movements and promote tourism between rural industries and ports;
- Develop government taskforce to develop strategy to improve direct shipping capacity and air freight capacity; and
- Develop regional aviation strategy to encourage investment in regional airport development, improvement of services, and develop policy for local provision of services to mining (RDANQ 2014).

19.5.3 Mining Projects

A number of mining projects are currently operating in the broader region. Figure 19-4 indicates where Queensland’s mineral, coal and petroleum operations and resources are located in relation to the Project site. Current active mining projects, including if under construction, are represented by a square box which is filled, with the grey boxes representing active coal mines, and the other coloured boxes representing other active metals and mineral mines.

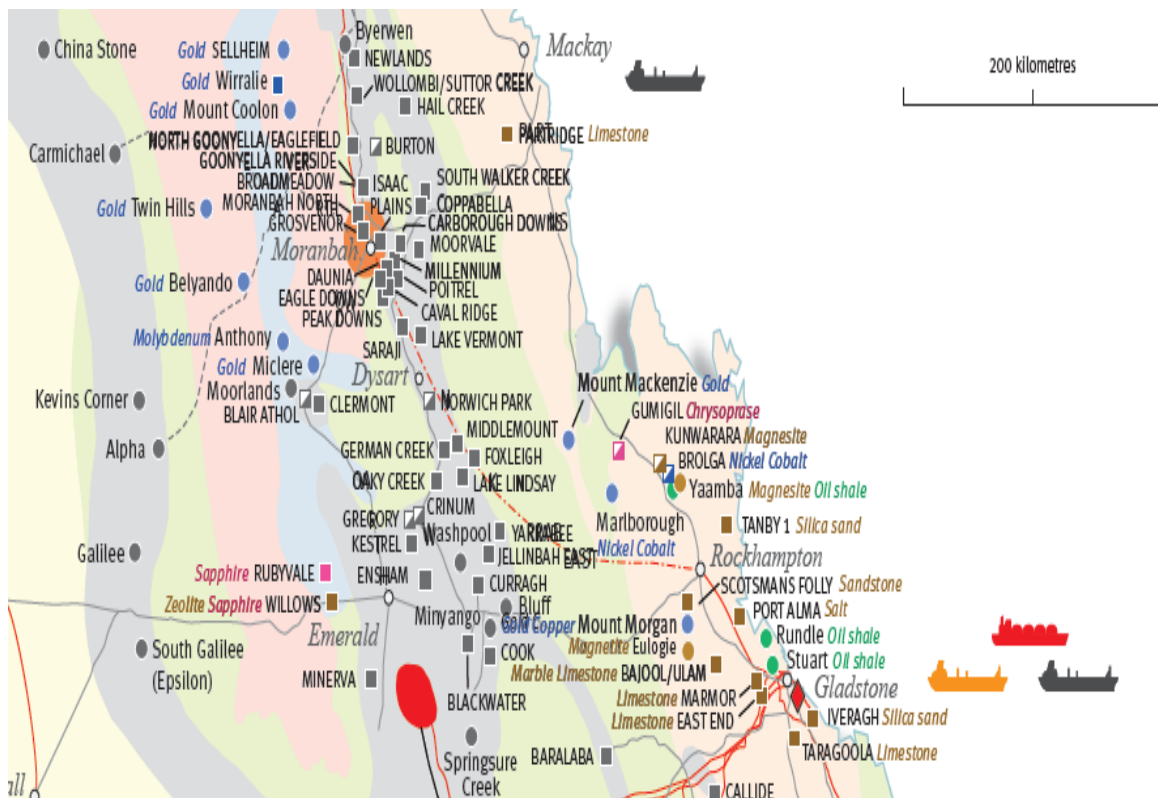


Figure 19-4 Current mining and resource projects near the Project site

Source: DNRM 2017

19.5.4 Demographics

19.5.4.1 Population

Whilst both council areas have shown a steady increase in population, the average growth rate has slowed down except for Rockhampton which has experienced a very slight increase in annual growth rate. Similarly, both the State and the nation have experienced steady growth over the last decade, which has slowed down in recent years (refer to Table 19-2).

Regarding size, Rockhampton has the largest population with 85,701 people as at 30 June 2016, followed by Livingstone with just under half the population of Rockhampton (refer to Table 19-2).

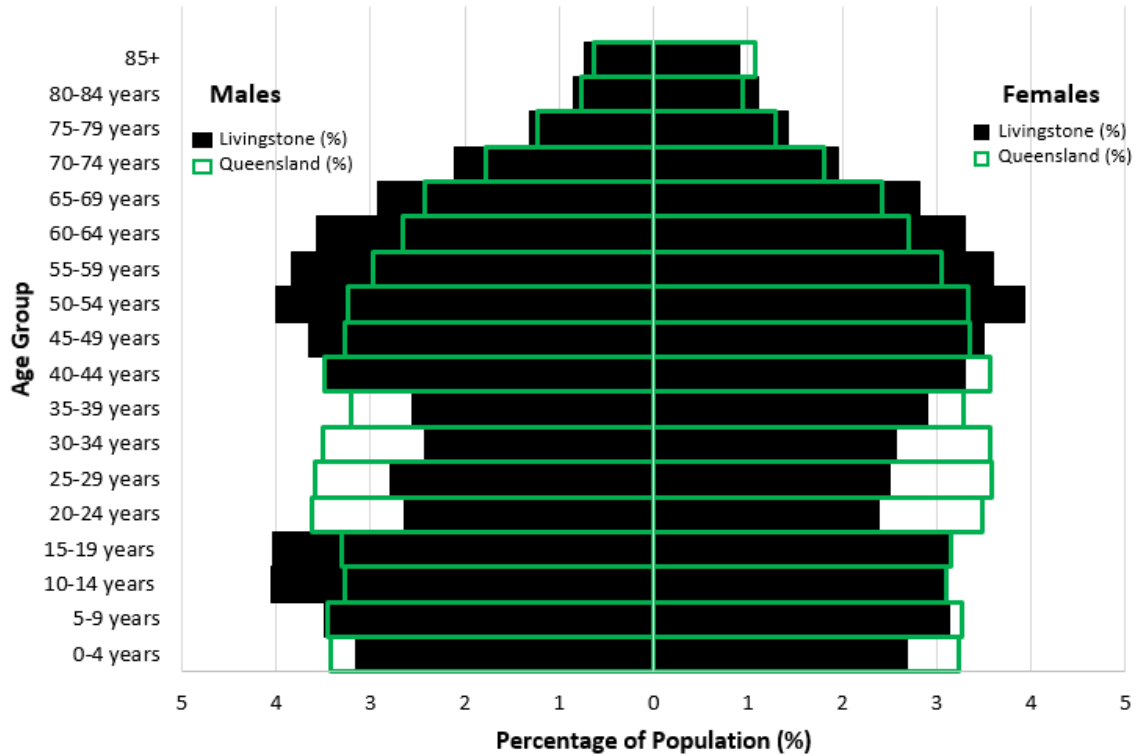
Table 19-2 Estimated resident population

Area	Population as at 30 June 2015			Average annual growth rate (%)	
	2005	2011	2016	2005-2016	2011-2016
Livingstone (S)	28,775	33,394	37,954	2.6	2.4
Rockhampton (R)	73,185	78,939	85,701	1.3	1.4
Queensland	3,918,494	4,476,778	4,853,048	2.0	1.6
Australia	20,176,844	22,031,750	23,777,777	1.6	1.4

Source: ABS 2016a

The potential areas of economic strength of the population and weaknesses can be pinpointed by further breaking down the population by age and gender for each council area. The population is broken down by age and gender below.

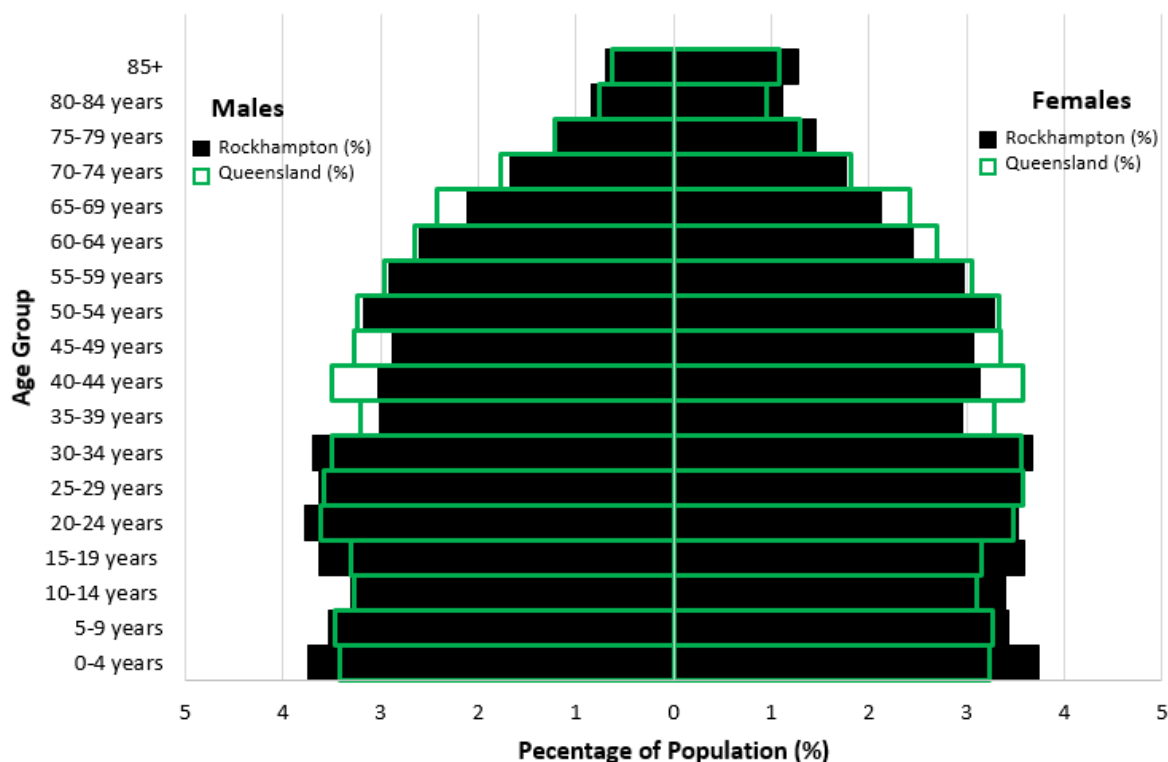
As per Figure 19-5, which depicts the population pyramid for Livingstone, 45-64 year old age bracket makes up the highest percentage of the population for both males and females, and this age range is higher in Livingstone than across Queensland. Conversely, the 20-39 year old age bracket is lower in Livingstone for males and females than across Queensland. This is indicative of the types of jobs available in Livingstone and nearby regions. Livingstone favours the older more experienced age group, with less opportunity currently for those with less experience or seeking tertiary education. Also of note, there are currently more males residing in Livingstone in the 10-19 year old age bracket than across Queensland.



Source: ABS 2016b

Figure 19-5 Population pyramid Livingstone (S) LGA and Queensland as at 30 June 2015

Rockhampton’s population by age and gender differs slightly compared to Queensland (refer to Figure 19-6). The population is most dense for both sexes in the 15-34 year old age bracket, followed by the 0-9 year old bracket. This is indicative of job opportunities which slightly favour people in peak physical fitness. This data also supports the presence of a large regional university in the region. When compared to the rest of Queensland, Rockhampton’s population is slightly less for males and females in the 35-49 year old age bracket and 65-69 year old age bracket.



Source: ABS 2016b

Figure 19-6 Population pyramid Rockhampton (R) LGA and Queensland as at 30 June 2015

19.5.4.2 Indigenous Population

The number of Indigenous persons, including Torres Strait Islanders, living in each geographical area has been determined using the 2011 census data (refer to Table 19-3). The Indigenous population in the Livingstone area as a percentage of the total population most closely resembles that of Queensland. The Rockhampton area is the exception to the national and state averages, with almost twice as many Indigenous persons residing in Rockhampton when compared to Queensland.

Table 19-3 Indigenous population (regional, state, national) as at 2016 census

Area	Indigenous Population as at 2001 census	%	Indigenous Population as at 2016 census	%	Total change 2001-2016 (%)
Livingstone (S)	764	2.9	1,607	4.4	110.3
Rockhampton (R)	3,626	5.2	5,874	7.4	61.9
Queensland	112,772	3.1	186,482	4.0	65.4
Australia	458,520	2.4	649,171	2.8	41.6

Source: (QGSO 2017a, b)

19.5.4.3 Projected Population

The Queensland Government Statistician's Office provide population projections generated by applying assumptions such as future trends in fertility, mortality and migration, as well as consideration of current planning and development intel (QGSO 2017a, and b). The ABS make similar assumptions in their provision of population projections; however, ABS acknowledge the unpredictable nature of the assumptions and produce three possible projection outcomes; high, medium, and low (ABS 2013a). Based on these projections, the Livingstone area is expected to exhibit by far the highest average growth rate up to 2036 and the Rockhampton area is predicted to show the slowest average growth rate and almost half that of Queensland (refer to Table 19-4).

Table 19-4 Projected population

Area	Projected population as at 30 June 2015		Average growth rate (%) 2021-2036
	2021	2036	
Livingstone (S)	41,427	57,042	2.4
Rockhampton (R)	90,013	104,100	1.0
Queensland	5,250,292	6,763,153	1.8
Australia	26,452,147	32,426,009	1.4

Source: ABS 2013a, QGSO 2017a and b

19.5.4.4 Median Age

The three regional areas exhibit quite different median ages (refer to Table 19-5). The median age in the Rockhampton area in 2005 was 35 years old and very similar to the State and national median. However, unlike Queensland and Australia, Rockhampton has not experienced incremental growth and the median age is still hovering around 35 in 2015. Livingstone has a particularly high median age in comparison, hovering around 40, and has experienced steady growth which is more than twice that of the State average.

Table 19-5 Median age

Area	Median age (years) as at 30 June 2015			% change (years) 2005-2015
	2005	2010	2015	
Livingstone (S)	39.7	40.3	41.8	5.3
Rockhampton (R)	35.0	34.8	34.8	-0.6
Queensland	35.9	36.4	36.9	2.8
Australia	36.6	37.0	37.4	2.2

Source: ABS 2016b, QGSO 2017a and b

19.5.4.5 Migration

The usual address of household members during the 2011 census is compared with the data from the 2006 census in Table 19-6. For the Livingstone area, almost half of residents have remained in the area and a third have moved to other parts of Queensland. The Rockhampton area has experienced similar movements to that of Livingstone, with just under half of residents remaining at the same address and a third moving to other parts of Queensland.

Table 19-6 Place of usual residence in 2006 compared to 2011

Area	Same address		Within QLD		Rest of Australia		Overseas	
	No.	%	No.	%	No.	%	No.	%
Livingstone (S)	15,055	49.1	10,693	34.9	1,485	4.8	707	2.3
Rockhampton (R)	35,550	46.3	24,904	32.4	2,011	2.6	2,186	2.8
Queensland	1,958,914	48.5	1,331,610	33.0	218,734	5.4	238,588	5.9
Australia	11,009,842	54.8	1,367,055	6.8	5,210,210	25.9	1,200,438	6.0

Source: ABS 2013b

19.5.4.6 Household Composition

Comparisons of household composition across all areas follow very similar patterns in the Livingstone and Rockhampton areas (refer to Table 19-7). One family households represent close to three quarters of households; lone person households represent between one fifth and one quarter; group households make up less than five per cent; and multiple family households make up less than two per cent. Of note, Rockhampton has the highest proportion of lone person households and lowest proportion of one family households, which may correlate to the workforce and nature of work.

Table 19-7 Household composition as at 2016 census

Area	One family households		Multiple family households		Group households		Lone person households	
	No.	%	No.	%	No.	%	No.	%
Livingstone (S)	8,424	74.1	203	1.8	271	2.4	2,472	21.7
Rockhampton (R)	19,510	68.8	378	1.3	1,009	3.6	7,470	26.3
Queensland	1,159,697	70.0	30,156	1.8	77,899	4.7	389,078	23.5
Australia	5,907,625	71.3	n/a	n/a	354,917	4.3	2,023,542	24.3

Source: ABS 2017, QGSO 2017a, b

19.5.5 Housing and Accommodation

19.5.5.1 Overall Market Trend

Regional Queensland on average has experienced falling property values, especially for local government areas with strong links to the mining and resources industry. The marked slowdown in activity in this industry can be attributed to the move from an exploration and construction phase towards a production phase (DNRM 2016). Consequently, the property market has experienced a decrease in demand for land and an increase in supply as displaced workers move out of the region (DNRM 2016).

19.5.5.2 Median Income

The median incomes for Livingstone and Rockhampton areas and the median mortgage repayments are presented in Table 19-8. The median total household income in Livingstone is quite similar to that of the Queensland and Australian median. Similarly, the median mortgage repayments in Livingstone are also on par with State and national medians. As a result, median mortgage repayments as a percentage of the median household income of this area is considerably low sitting at 18.5 per cent. The Rockhampton area has significantly lower median mortgage repayments compared to the other geographic areas.

Table 19-8 Median incomes v mortgage repayment as at 2016 census

Area	Median mortgage repayment (\$/month)	Median total household income (\$/week)	Median total personal income (\$/week)	Mortgage as % of median household income
Livingstone (S)	1,875	1,300	618	39.8
Rockhampton (R)	1,517	1,255	626	34.3
Queensland	1,733	1,402	600	37.4
Australia	1,755	1,438	662	36.5

Source: ABS 2017, QGSO 2017a, b

19.5.5.3 Property Prices

Property prices across the board have shown a decline, with some trends more dramatic than others. Median weekly rent for the Livingstone and Rockhampton regional areas have declined between the 2014 December quarter and the 2016 December quarter (refer to Table 19-9). New bonds lodged have also experienced a drop of 12.2 per cent in Rockhampton over the same period, indicating there is also fewer rental properties on the market. Despite Livingstone increasing new bonds lodged by a considerable 22.6 per cent, this has not resulted in a reduced median weekly rent.

Table 19-9 Median weekly rent based on three bedroom house (2014 – 2016)

Area	Dec Qtr 2014		Dec Qtr 2015		Dec Qtr 2016		Change (%)	
	Rent (\$)	New bonds lodged	Rent (\$)	New bonds lodged	Rent (\$)	New bonds lodged	Rent	New bonds lodged
Livingstone (S)	300	146	300	166	290	179	-3.3	22.6
Rockhampton (R)	295	246	290	238	278	216	-5.8	-12.2
Queensland	350	53,079	350	n/a	350	51,465	0.0	-3.0

Source: RTA QLD 2016

Land prices have remained steady with Livingstone dropping slightly by 2.9 per cent, and Rockhampton slightly increasing by 1.2 per cent over the same period (refer to Table 19-10).

Table 19-10 Historical trends in land valuations for LGAs (2012-2016)

Local Government Area (LGA)	Change in land valuation (%)					
	2012	2013	2014	2015	2016	Overall change (%)
Livingstone (S)*			NV	-2.9	NV	-2.9
Rockhampton (R)*			NV	1.2	NV	1.2

* Livingstone and Rockhampton de-amalgamated in 2014

NV = no valuation

Source: Queensland Government 2016a

19.5.6 Education

The 2011 census data provides an overview of the level of education in the relevant areas (refer to Table 19-11). The Livingstone area has the highest proportion of residents with a university education. The Rockhampton area is slightly lower than Livingstone despite including a top regional university in the area.

Table 19-11 Highest level of education as at 2016¹ or 2011² census

Area	Year 9 or 10 or equivalent ¹		Year 11 or 12 or equivalent ¹		Technical or tertiary education ²		University institution ²	
	No.	%	No.	%	No.	%	No.	%
Livingstone (S)	9,446	33.5	13,402	47.5	7,215	27.7	2,924	11.2
Rockhampton (R)	19,230	31.8	26,749	49.2	15,125	25.0	6,611	10.9
Queensland	964,903	26.5	2,146,809	58.9	947,771	27.4	548,894	15.9
Australia	4,419,899	26.6	9,669,205	58.1	4,527,959	46.7	3,268,908	33.7

Source: 1. ABS 2013b; 2. QGSO 2017a, b

19.5.7 Cultural and Ethnic Characteristics

In comparison to Queensland and Australia, the Livingstone and Rockhampton regional areas have half as many residents born overseas as a percentage of total residents (refer to Table 19-12). Of those born overseas, almost 40 per cent of Rockhampton residents speak another language at home and English. The exception to the trend is Livingstone residents, with only 17.5 per cent of those born overseas speaking another language at home and English, and indicative of exhibiting less migrants from non-English speaking countries. Across the study areas, the top non-English languages spoken are predominantly South East Asian Austronesian (including Indonesian, Malay, and Filipino), Indo Aryan (largely various Indian dialects), and Chinese (largely Mandarin and Cantonese) (ABS 2011).

Table 19-12 Country of birth and English proficiency as at 2011 census

Area	Born in Australia		Born overseas		Speaks language at home other than English		Top non-English languages spoken
	No.	%	No.	%	No.	%	
Livingstone (S)	29,404	81.1	3,651	10.1	995	2.7	1. German (0.3%) 2. SE Asian Austronesian (0.3%) 3. Afrikaans (0.2%)
Rockhampton (R)	65,958	82.7	7,494	9.4	4,765	6.0	1. Indo Aryan (1.0%) 2. SE Asian Austronesian (0.9%) 3. Vietnamese (0.5%)
Queensland	3,343,819	71.1	1,015,875	21.6	564,196	12.0	1. Mandarin (0.9%) 2. Cantonese (0.5%) 3. Vietnamese (0.5%)
Australia	15,614,835	66.7	6,172,326	26.4	1,971,011	22.2	1. Mandarin (2.5%) 2. Arabic (1.4%) 3. Cantonese (1.2%)

Source: ABS 2017, QGSO 2017a, b

19.5.8 Community Services and Facilities

The regional areas are well serviced with a spread of schools, hospitals and aged care services throughout, and access to emergency services at multiple locations (refer to Table 19-13).

Table 19-13 Community Services and Facilities as at 30 June 2016

Area	Police stations	Ambulance stations	Fire stations	Schools	Hospitals	Aged care services
Livingstone (S)	3	3	2	16	2	6
Rockhampton (R)	7	5	4	45	5	26
Queensland	336	291	242	1,796	276	954

Source: QGSO 2017a, b

19.5.8.1 Livingstone Shire Council

The coastal towns of Yeppoon and Emu Park are the largest in the Livingstone area, with populations of 16,372 and 4,544 respectively as at the 2011 census (ABS 2013b). Consequently, most services are concentrated around these precincts.

Essential Services

The main hospital for the region is Capricorn Coast Hospital and Health Service, which is in Yeppoon on the coast (QH 2017).

Livingstone has 13 primary schools and three secondary schools (QGSO 2017a).

Police stations and ambulance stations are in Emu Park, Marlborough, and Yeppoon (QLD Police 2011 and QAS 2013). Fire stations are located at Emu Park and Yeppoon only (QFES 2016).

There are six aged care service providers in the area (refer to Table 19-13) with a total of 310 available places across community care and residential aged care; however, there are no transitional care places available (QGSO 2017a).

Local Infrastructure

The closest airport is Rockhampton Airport, located in the RRC.

Major Projects

The most significant major development underway in Livingstone is the Yeppoon Foreshore and Town Centre Revitalisation, which is jointly funded by Federal, State and Local Government. This development will update significant public spaces to increase local utilisation and attract tourists. The Project is expected to generate 681 additional ongoing jobs post construction and \$6 million in additional tourism revenue to Livingstone (Livingstone Shire Council 2017c). Regarding major infrastructure projects, the Panorama Drive project will see the construction of a strategic road link which will form a key transport corridor linking the northern suburbs of Yeppoon with key local infrastructure such as airports and resource nodes. This project is jointly funded by Federal and State Governments (Livingstone Shire Council 2017c).

19.5.8.2 Rockhampton Regional Council

The town of Rockhampton is where the majority of residents reside, with 60,216 residents as at the 2011 census (ABS 2013b). Whilst services and the major regional airport are very much concentrated around this township, services are spread out across the entire council area.

Essential Services

The major hospital for the region is Rockhampton Hospital, a leading health facility for the State, and two additional private hospitals servicing the region (Rockhampton Regional Council 2017c).

The region includes 18 private schools, 22 state primary schools, four state high schools, and the Central Queensland University (Rockhampton Regional Council 2017c).

Police stations are located in Gracemere, Lakes Creek, Mount Morgan, Marmor, North Rockhampton, Rockhampton, and Westwood (QLD Police 2011). Ambulance stations and fire stations are located in Gracemere, Mount Morgan, North Rockhampton and Rockhampton (QAS 2013 and QFES 2016). The Queensland Government have initiated a \$2.2 million project to extend the Rockhampton Fire Station for improved operational areas and amenities (Queensland Government 2016b).

There are 26 aged care service providers in the area (Table 19-13) with a total of 1,237 available places across community care, residential aged care, and transitional care (QGSO 2017c). The increased number of places coincides with the largest number and percentage of 75+ year olds across the three areas (refer to Figure 19-6).

Local Infrastructure

The Rockhampton Airport is considered a major regional airport with direct flights to Brisbane, Gladstone, Mackay, Townsville, Cairns and the Gold Coast. The airport is located 5 km from the Rockhampton City Centre, and is serviced by QantasLink, Virgin Australia, and JetGo Australia (Rockhampton Regional Council 2017d).

Major Projects

The Bruce Highway Safety Package, a joint infrastructure partnership of Federal and State Governments (DTMR 2017), includes multiple projects which benefit the Rockhampton region. These include:

- \$5.2 million intersection upgrade to improve traffic flow for motorists travelling north of Rockhampton (completion due mid-2017); and
- \$32 million highway reconstruction, widening and intersection upgrades between Bajool and Midgee in Rockhampton (completion due August 2017).

The North Rockhampton Intersection \$10 million upgrade, a State Government Infrastructure Plan (DTMR 2017), will see improvements to the safety and efficiency of two of Rockhampton's busiest intersections, and are expected to be completed in early 2017.

The Queensland Government and Central Queensland University is jointly funding \$8.5 million to construct an integral intersection near the university (Queensland Government 2016b).

The region is also undergoing a redevelopment of the main precinct in the Riverfront Revitalisation project, to attract locals, businesses and visitors to Quay Street and the pier (Rockhampton Regional Council 2017e).

19.5.9 Law and Order

As would be expected, the number of offences in each region directly correlates to population size (refer to Table 19-14). The Livingstone area exhibits slightly higher offences against property, and the Rockhampton area exhibits slightly higher offences against a person. Compared to the overall rate of reported offences in Queensland, Livingstone exhibits a rate that is close to half, whilst Rockhampton exhibits a rate which is almost 50 per cent higher.

Table 19-14 Reported offences for 2015/16 period

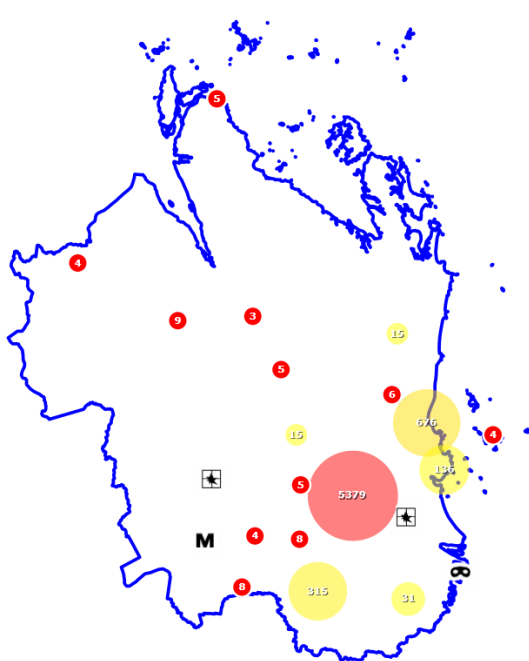
Area	Offences against person		Offences against property		Other offences		Total	Rate (p/100,000 persons)
	No.	%	No.	%	No.	%		
Livingstone (S)	144	6.6	851	39.3	1,173	54.1	2,168	5,760
Rockhampton (R)	841	7.0	4,579	37.9	6,660	55.1	12,080	14,398
Queensland	30,690	6.4	205,583	43.1	240,540	50.4	476,813	9,856

Source: QGSO 2017a, b, and c

19.5.9.1 Livingstone Shire Council and Rockhampton Regional Council

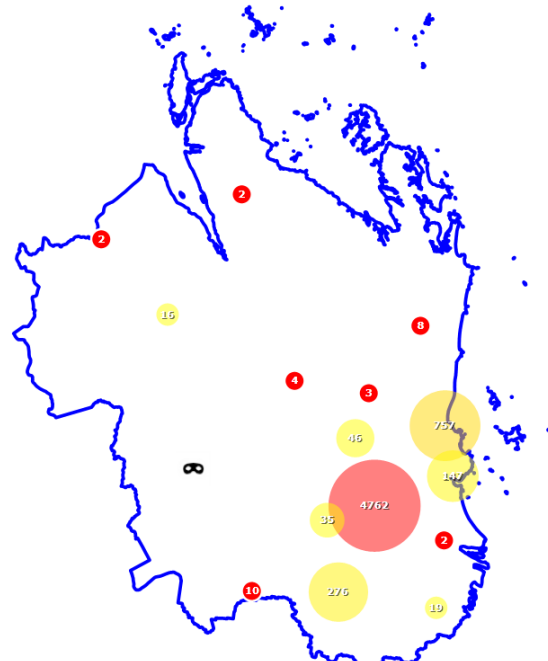
The Queensland Police (2017) provide an interactive map which breaks down offences for a geographical area over a selected period. Using this resource, the RRC area was combined with the LSC area, and as such the analysis is combined.

The two maps in Figure 19-7 and Figure 19-8 show a concentration of offences around the largest townships in the area. There has been a notable drop in offences in Rockhampton which has shifted to an increase in offences in Yeppoon; however, it is likely that this is based on seasonality with more people visiting the seaside town of Yeppoon over the school holidays and summer period.



Source: QLD Police 2017

Figure 19-7 Location of offences in Rockhampton / Livingstone area, 1 July - 31 Dec 2015



Source: QLD Police 2017

Figure 19-8 Location of offences in Rockhampton / Livingstone area, 1 Jan - 30 June 2016

For the 2015/16 period the top three offences in Rockhampton were; 1) Other theft; 2) Drug offences; 3) Good order offences. The top three offences in Yeppoon, which is the largest township in the Livingstone area were; 1) Other theft; 2) Drug offences; 3) Traffic and related offences (QLD Police 2017).

19.5.10 Disaster Management

Due to the unpredictable nature of weather in some regional parts of Queensland, individual council areas provide resources and support to their residents regarding disaster management. The *Disaster Management Act 2003* (Qld) is a state government piece of legislation designed to help communities mitigate the potential adverse effects of a disaster or emergency. The legislation mandates that the State, disaster districts and Local Government Areas establish individual disaster management groups who prepare disaster management plans and guidelines, and make available to community's appropriate information to prepare, respond and recover from a disaster.

19.5.10.1 Livingstone Shire Council

The Livingstone residents are supported by the council with a Local Disaster Management Group, Local Disaster Coordination Centre and Local Disaster Management Plan. There are also a multitude of fact sheets, emergency plans and forms available to residents via the council website. A cyclone shelter has been made available to residents in the largest township of Yeppoon. In this area, flood and cyclone season is between the months of November to April (Livingstone Shire Council 2017d).

19.5.10.2 Rockhampton Regional Council

In addition to the resources already mentioned, RRC have also developed a suite of video vignettes which outline the individual components of disaster management to the region and are available online via YouTube (Rockhampton Regional Council 2017f).

19.6 Existing Economic Environment

This section describes the existing local, regional, state and national economies that may be affected by the Project. The following aspects are considered:

- Size and structure of the existing economy;
- Industry analysis;
- Development pipeline;
- Agricultural production;
- Socio-economic index for areas; and
- Value of ecosystem services.

19.6.1 Size and Structure of the Existing Economy

19.6.1.1 Population Size and Projected Growth

The population of the Livingstone Shire is projected to increase from 37,954 persons in 2016 to 57,042 persons in 2036 or by 2.2% per annum. The rate of population growth within Livingstone Shire is anticipated to be higher than in Fitzroy SA4 and in Queensland.

The working age population (that is those persons aged between 15 and 64) within Livingstone Shire is projected to increase from 24,116 persons in 2016 to 32,238 persons in 2036, or by 1.5% per annum. The lower rates of growth for the working age population within all regions relative to the rate of growth for the total population indicates that the proportion of persons within the working age cohort is anticipated to decline between 2016 and 2036.

The population projections for Livingstone Shire, Fitzroy SA4 and Queensland between 2016 and 2036 is presented in Table 19-6.

Table 19-15 Population projections, Livingstone Shire, Fitzroy SA4 and Queensland, 2016-2036

	2016	2021	2026	2031	2036	Avg Annual Growth, 2016-2036
Total Population						
Livingstone Shire	37,954	41,427	45,994	51,142	57,042	2.1%
Fitzroy SA4	241,858	260,561	281,178	302,583	324,246	1.5%
Queensland	4,853,048	5,250,292	5,730,062	6,240,546	6,763,153	1.7%
Working Age Population (15-64 yrs)						
Livingstone Shire	24,116	25,277	27,231	29,475	32,238	1.5%
Fitzroy SA4	158,755	167,398	177,399	188,044	198,898	1.1%
Queensland	3,180,503	3,371,867	3,619,087	3,887,600	4,159,168	1.4%

Note: Population projection data in this table was the latest available at the time of report preparation (March 2016)

Source: Queensland Government Statistician's Office (2015), Economic Associates estimates

19.6.1.2 Gross Regional Product

Gross Regional Product (GRP) represents the market value of all final goods and services produced within the regional economy during a given period, while Gross State Product is the market value of that produced within the State economy. Between 2000-01 and 2010-11, the nominal GRP at current prices within Fitzroy SA4 increased from \$7,842 million in 2001 to \$20,974 million in 2011, or by 10.3% per annum. Fitzroy SA4 recorded significantly higher rates of GRP growth than Queensland (which achieved 8.8% per annum growth over the same period).

The main drivers of Fitzroy SA4's GRP growth were construction (22.7% per annum) and mining (13.4% per annum) which achieved above average rates of growth in industry value added.

The nominal GRP at current prices by industry for Fitzroy SA4 and Queensland for 2001 and 2011 is presented in Table 19-16.

Table 19-16 Nominal Gross Regional Product by industry for Fitzroy SA4 and Queensland

Industry	Fitzroy SA4			Queensland		
	2001*	2011*	Ave Annual Growth, 2001-2011	2001*	2011*	Ave Annual Growth, 2001-2011
Agriculture, forestry and fishing	\$570	\$534	-0.7%	\$5,079	\$6,795	3.0%
Mining	\$1,943	\$6,840	13.4%	\$7,813	\$26,990	13.2%
Manufacturing	\$789	\$1,556	7.0%	\$11,665	\$20,577	5.8%
Electricity, gas, water and waste services	\$341	\$778	8.6%	\$2,178	\$6,636	11.8%
Construction	\$441	\$3,408	22.7%	\$7,293	\$23,436	12.4%
Wholesale trade	\$363	\$622	5.5%	\$6,239	\$13,524	8.0%
Retail trade	\$297	\$585	7.0%	\$6,697	\$13,732	7.4%
Accommodation and food services	\$167	\$285	5.5%	\$3,749	\$6,555	5.7%
Transport, postal and warehousing	\$514	\$1,123	8.1%	\$7,267	\$15,821	8.1%
Information media and telecommunications	\$134	\$153	1.3%	\$3,756	\$5,284	3.5%
Financial and insurance services	\$178	\$384	8.0%	\$6,280	\$16,831	10.4%
Rental, hiring and real estate services	\$81	\$279	13.2%	\$2,482	\$6,273	9.7%
Professional, scientific and technical services	\$154	\$558	13.7%	\$4,918	\$15,421	12.1%
Administrative and support services	\$87	\$218	9.6%	\$2,109	\$5,365	9.8%
Public administration and safety	\$223	\$532	9.1%	\$5,931	\$14,079	9.0%
Education and training	\$289	\$500	5.6%	\$5,131	\$10,406	7.3%
Health care and social assistance	\$288	\$630	8.1%	\$6,441	\$16,092	9.6%
Arts and recreation services	\$29	\$28	-0.4%	\$1,039	\$1,495	3.7%
Other services	\$127	\$268	7.8%	\$2,552	\$4,633	6.1%

Industry	Fitzroy SA4			Queensland		
	2001*	2011*	Ave Annual Growth, 2001-2011	2001*	2011*	Ave Annual Growth, 2001-2011
Ownership of dwellings	\$337	\$811	9.2%	\$8,774	\$23,255	10.2%
Gross Value Added	\$7,354	\$20,094	10.6%	\$107,393	\$253,201	9.0%
Gross Regional Product	\$7,842	\$20,974	10.3%	\$116,561	\$269,866	8.8%

* (current prices - \$m)

Source: Queensland Treasury and Trade (2013)

19.6.2 Industry Analysis

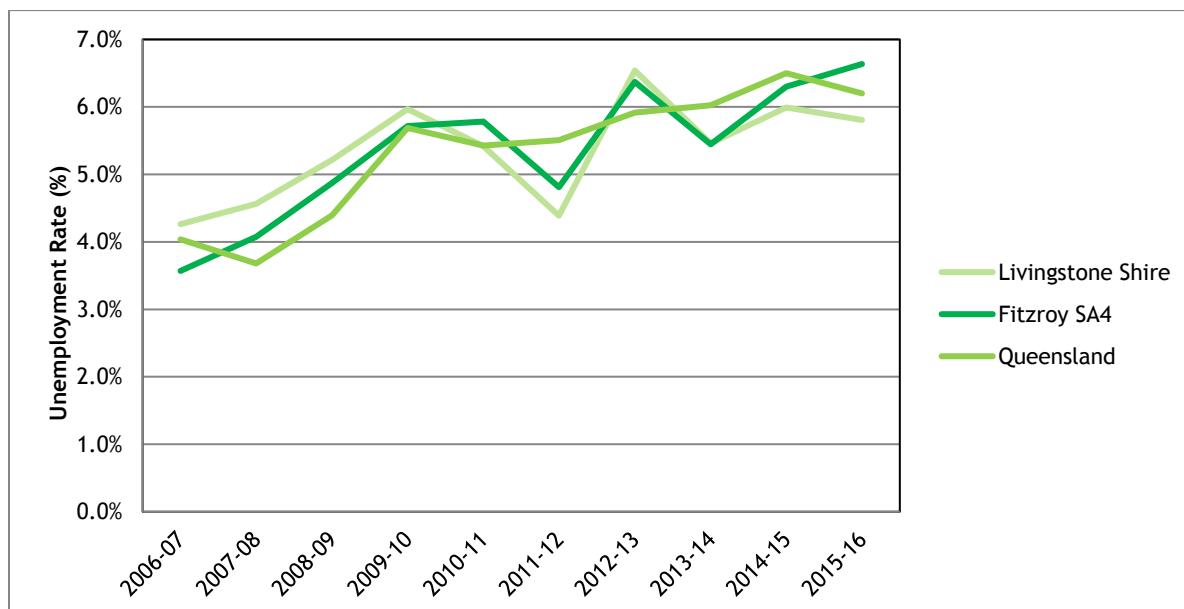
19.6.2.1 Workforce Size

The size of the labour force in Livingstone Shire increased from 14,135 persons in 2006-07 to 18,262 persons in 2015-16, representing an average annual growth rate of 2.6%. By comparison, the size of the labour force in Fitzroy SA4 has grown at an average annual rate of 1.6%, whereas the size of the labour force in Queensland has grown at an average annual rate of 1.4%.

19.6.2.2 Unemployment Rate

The unemployment rate in Livingstone Shire has increased from 4.3% in 2006-07 to 5.8% in 2015-16. However, the unemployment rate in Livingstone Shire in 2015-16 was lower than that of Fitzroy SA4 and Queensland (at 6.6% and 6.2% respectively). Both Livingstone Shire and Fitzroy SA4 have shown a similar trend in unemployment, with the unemployment rate quite volatile between 2009-10 and 2013-14. Since 2013-14 the unemployment rate in Fitzroy SA4 has diverged from Livingstone Shire and increased to 6.6% in 2015-16.

The unemployment rate trends in Livingstone Shire, Fitzroy SA4 and Queensland between 2006 to 2016 is presented in Figure 19-9.



Source: Department of Employment (various years)

Figure 19-9 Unemployment rate in Livingstone Shire, Fitzroy SA4 and Queensland

19.6.2.4 Labour Force Participation Rate

Between 2006-07 and 2015-16, the labour force participation rate in Livingstone Shire has consistently been below that of Fitzroy SA4 and Queensland by several percentage points. However, labour force participation in Livingstone Shire has increased from 56.2% in 2006-07 to 59.6% in 2015-16, where the labour force participation rate in Queensland has decreased from 65.6% to 64.7% in the same period. The labour force participation rate in Fitzroy SA4 has been loosely on par with Queensland, though was significantly higher in 2010-11 and between 2013-14 and 2014-15.

The average labour force participation rate in Livingstone Shire was 59.4% in the 2006-07 to 2015-16 period, significantly lower than in Fitzroy SA4 (66.5%) and Queensland (65.6%).

19.6.2.5 Employment by Industry

In Livingstone Shire, 10.7%, 10.4% and 10.2% of persons were employed in the construction, retail trade and health care and social assistance sectors respectively, as of the 2011 census. Livingstone Shire recorded a lower incidence of employment in manufacturing, and a higher incidence of employment in construction and education and training, relative to Fitzroy SA4 and Queensland.

The proportion of employment by industry sector in Livingstone Shire, Fitzroy SA4 and Queensland in 2011 is summarised in Table 19-17.

Table 19-17 Employment by industry for Livingstone Shire, SA4 and Queensland, 2011

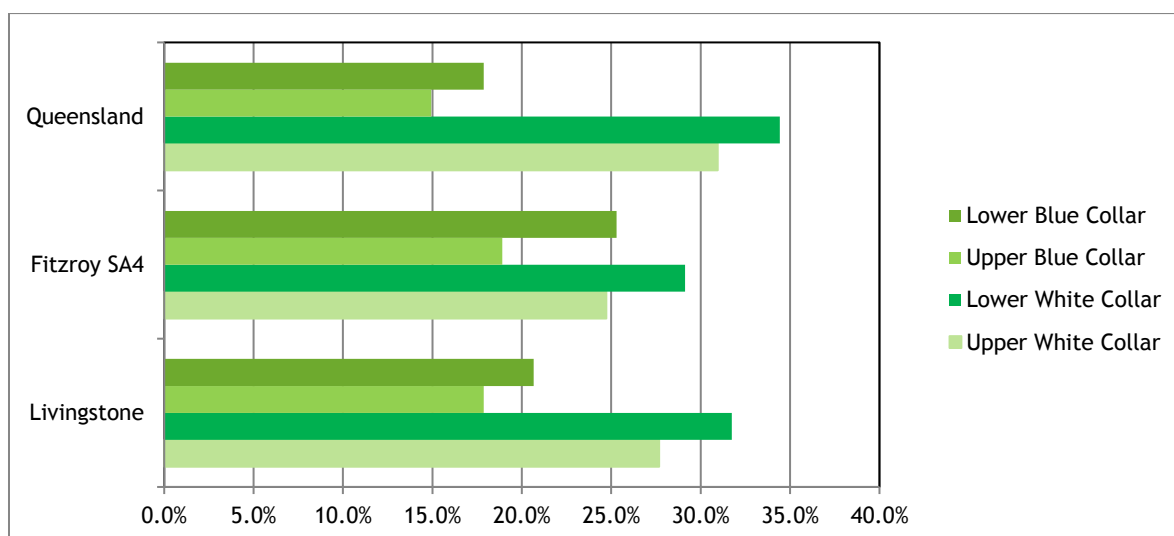
Industry	Livingstone	Fitzroy SA4	Queensland
Agriculture, forestry and fishing	3.9%	4.6%	2.7%
Mining	8.2%	8.7%	2.6%
Manufacturing	6.2%	9.6%	8.4%
Electricity, gas, water and waste services	2.2%	2.4%	1.2%
Construction	10.7%	9.7%	9.0%
Wholesale trade	2.8%	3.0%	3.6%
Retail trade	10.4%	9.7%	10.7%
Accommodation and food services	7.6%	6.6%	7.0%
Transport, postal and warehousing	4.2%	6.1%	5.3%
Information media and telecommunications	0.6%	0.6%	1.2%
Financial and insurance services	1.7%	1.4%	2.7%
Rental, hiring and real estate services	1.6%	1.6%	1.8%
Professional, scientific and technical services	4.1%	4.5%	6.5%
Administrative and support services	2.3%	2.4%	3.2%
Public administration and safety	6.5%	5.3%	6.7%
Education and training	9.7%	7.7%	7.9%
Health care and social assistance	10.2%	9.3%	11.9%
Arts and recreation services	1.0%	0.6%	1.4%
Other services	3.8%	3.9%	6.2%
Total	14,734	101,129	2,039,275

Source: Australian Bureau of Statistics (2013a)

19.6.2.6 Occupation Type

Livingstone Shire recorded a significantly higher proportion of both lower and upper white collar workers than Fitzroy SA4 and a significantly lower incidence of lower blue collar workers than Fitzroy SA4 as of the 2011 census. Livingstone Shire recorded significantly higher proportions of blue collar workers and significantly lower proportions of white collar workers relative to Queensland as of the 2011 census.

The proportion of employment by occupation in Livingstone Shire, Fitzroy SA4 and Queensland as of the 2011 census is summarised in Figure 19-10.



Source: Australian Bureau of Statistics (2013a)

Figure 19-10 Employment by occupation type in Livingstone Shire, Fitzroy SA4 and Queensland, 2011

19.6.2.7 Qualifications

The incidence of persons with a post school qualification in Livingstone Shire was comparable with Queensland at 38.2% and 41.9% respectively, yet significantly lower in Fitzroy SA4 (35.9%) as of the 2011 census. The incidence of persons with a certificate is higher in Livingstone Shire than both Fitzroy SA4 and Queensland.

19.6.2.8 Enterprise Activity

The latest edition of the ABS Counts of Australian Businesses publication presents business count estimates by industry at the Statistical Area Level 2 (SA2) level (Livingstone Shire and Fitzroy SA4). Significant business activity in the region(s) is undertaken by enterprises registered outside the region(s). This business register data provides an indication of the number and capability of locally based businesses. Statistics on the businesses in the Livingstone Shire and Fitzroy SA4 is discussed below along with a regional comparison.

Livingstone Shire

As of February 2017, there was an estimated 3,235 registered businesses in Livingstone Shire, with an estimated 63.6% classified as sole operators. Just under a quarter of all registered businesses were classified within the agriculture, forestry and fishing Sector (761 businesses) and just over a fifth were classified within the construction sector (731 businesses). There were 44 businesses within the Livingstone Shire that recorded employment of 20-199 workers, comprising six in accommodation and food services, five in administrative and support services and six in health care and social assistance. There were no businesses identified within Livingstone Shire that employed 200 or more workers.

Fitzroy SA4

Within Fitzroy SA4, there were an estimated 17,795 registered businesses as of February 2017, with an estimated 62.7% of all businesses classified as sole operators. The most common business types (in terms of number of businesses) in Fitzroy SA4 were agriculture, forestry and fishing (4,763 businesses), construction (2,924 businesses) and rental, hiring and real estate services (1,610 businesses). As of February 2017, there were no registered businesses in Fitzroy SA4 that employed 200 or more persons.

Regional Comparison

In Livingstone Shire, 22.6% of registered businesses were within the construction sector, as compared to 16.4% of registered businesses in Fitzroy SA4 and 17.1% of registered businesses in Queensland, as of February 2017.

Fitzroy SA4 had a significantly higher proportion of registered businesses within the agriculture, forestry and fishing sector compared to Livingstone Shire and Queensland at 26.8%, 23.5% and 9.7% respectively. Livingstone Shire had significantly lower proportions of registered businesses within the retail trade and health care and social assistance sectors relative to Fitzroy SA4 and Queensland.

The distribution of total businesses by industry section within Livingstone Shire, Fitzroy SA4 and Queensland as of February 2017 is presented in Table 19-18.

Table 19-18 Total businesses by industry section, regional comparison, 2017

Industry Sections	Livingstone Shire	Fitzroy SA4	Queensland
Agriculture, Forestry & Fishing	23.5%	26.8%	9.7%
Mining	1.1%	0.9%	0.4%
Manufacturing	2.8%	2.9%	3.8%
Electricity, Gas, Water & Waste Services	0.3%	0.3%	0.3%
Construction	22.6%	16.4%	17.1%
Wholesale Trade	1.5%	1.6%	3.1%
Retail Trade	3.8%	5.0%	5.9%
Accommodation and Food Services	3.6%	3.8%	4.0%
Transport, Postal & Warehousing	5.0%	6.0%	5.9%
Information Media & Telecommunications	0.3%	0.2%	0.7%
Financial & Insurance Services	5.3%	5.4%	9.7%
Rental, Hiring & Real Estate Services	8.7%	9.0%	10.0%
Professional, Scientific & Technical Services	6.0%	6.0%	11.0%
Administrative & Support Services	3.4%	2.9%	3.9%
Public Administration & Safety	0.2%	0.2%	0.3%
Education & Training	1.3%	1.1%	1.3%
Health Care & Social Assistance	2.8%	3.7%	5.6%
Arts & Recreation Services	1.2%	0.9%	1.1%
Other Services	5.7%	5.9%	4.7%
Not Classified	1.0%	1.0%	1.3%
Total	3,235	17,795	425,576

19.6.3 Development Pipeline

There were 21 major developments identified within the Fitzroy SA4, comprising 14 coal, mineral and gas projects (including the Project) and seven other developments (comprising a steel plant, two tourism, three water infrastructure and one port related development).

The proposed major developments within Fitzroy SA4 that are currently within the development pipeline are summarised in Table 19-19.

Table 19-19 Development pipeline within Fitzroy SA4

Project	Proponent	Location	Project Details	Status
Coal, Mineral & Gas Projects				
Broughton Coal Mine Project	U&D Mining Industry Pty Ltd	100km west-south west of Mackay, 27km north-west of the township of Nebo in the Isaac Regional Council local government area	3Mt coal per annum over 15 years	EIS under preparation
Gladstone New Fuels Development Project Stage 2A	Aussun Pty Ltd, Stuart Pty Ltd	15km north-west of Gladstone	5Mt oil shale per annum over 20 years	EIS under preparation
New Lenton Coal Project	New Lenton Coal Pty Ltd	65km north-west of Nebo, adjacent Isaac River, 65km north of Moranbah and 20km south of Glenden.	8Mt ROM coal per annum	EIS under preparation
Saraji East Mining Lease Project	BHP Coal Pty Ltd, QCT Mining Pty Ltd, Mitsubishi Development Pty Ltd, QCT Investment Pty Ltd, BHP Queensland Coal Investments Pty, Ltd, QCT Resources Pty Ltd and Umal Consolidated Pty Ltd	30km north of Dysart, Central Queensland	7Mt metallurgical product coal per annum over 25-30 years	Public notification of draft ToR
Styx Coal Project (the Project)	Styx Coal Pty Ltd, Fairway Coal Pty Ltd	130km north-west of Rockhampton, Styx Basin	10Mt ROM coal per annum over 20-25 years	Public notification of draft ToR
Baralaba South Project	Wonbindi Coal Pty Ltd	115km south-west of Rockhampton, 8km south of Baralaba.	6Mt ROM coal per annum over 23-40 years	Public notification of draft ToR
Olive Downs Project	Pembroke Resources South Pty Ltd	40km south-east of Moranbah	14Mt coking coal per annum	Public notification of draft ToR
South Burnett Coal Project	MRV Tarong Basin Coal Pty Ltd	6km south of Kingaroy	Open cut thermal coal mine	EIS under preparation
Kevin's Corner Project	Hancock Galilee Pty Ltd	160km west of emerald	30Mt coal per annum	Approved (2013)
Arrow LNG Plant	Arrow CSG Pty Ltd	Curtis Island	LNG processing plant, pipeline, dredging	Approved (2013)
Boundary Hill South Project	Anglo American's Coal Pty Ltd	20km north of Biloela	2.6Mt coal per annum	Approved (2016)
Curragh North Coal Project	Wesfarmers Curragh Pty Ltd	25km north of Blackwater	7Mt coal per annum over 40 years	Approved (2016)
Rolleston Coal Expansion Project	Glencore Coal Queensland Pty Ltd	Rolleston	19Mt coal per annum over 30 years	Approved (2015)
Springsure Creek Coal Mine Project	Springsure Creek Coal Pty Ltd	47km south-east of Emerald	11Mt coal per annum	Approved (2013)
Other Projects				
Capricorn Integrated Resort	Iwasaki Sangyi Co Pty Ltd	9km north-east of Yeppoon, 45km north of Rockhampton	300 rooms, golf course, cattle farm, residential community 8,000 dwellings, airstrip	Draft EIS under preparation
Gladstone Steel Plant Project	Boulder Steel Ltd	Gladstone state development area	5Mt semi-finished steel per annum, port facilities, coal dump	EIS under preparation

Project	Proponent	Location	Project Details	Status
			station, co-generation power station	
Gladstone-Fitzroy Pipeline	Gladstone Area Water Board	Stanwell-Gladstone	Underground pipeline	Approved (2015)
Lower Fitzroy River Infrastructure Project	SunWater Ltd (Government-owned)	Lower Fitzroy River: 62 km northwest and 66 km southwest of Rockhampton	Raising of existing Eden Bann weir, construction of new Rookwood weir	Approved (2017)
Nathan Dam and Pipelines	SunWater Ltd (Government-owned)	36km north-east of Taroom	888,000ML dam, 66,000ML per annum, 149km trunk pipeline	Approved (2017)
Port of Gladstone Western Basin Dredging Project	Gladstone Ports Co Ltd	10km north of Gladstone city	deepening and widening of existing channels, new channels	Approved (2010)
Great Keppel Island Resort	GKI Resort Pty Ltd	12km off coast of Yeppoon	250 rooms, 750 villas, 300 apartments, marina, yacht club, golf course	Approved (2014)

Source: Department of State Development (2017), Department of Environment and Heritage Protection (2017)

19.6.4 Agricultural Production

Agricultural production data (in terms of volume and value of production) has been collated from the ABS as of the 2010-11 financial year for Livingstone Shire, Fitzroy SA4 and Queensland. This is the most recent comprehensive dataset available at the small area level.

The assessment of agricultural production has focussed on the key commodities produced within Fitzroy SA4 and has included all commodities produced within Livingstone Shire.

19.6.4.1 Volume of Production

Cropping

In Livingstone Shire, the cropping commodities produced in 2010-11 were:

- Sugar cane: 27,980 tonnes or 0.1% of Queensland production;
- Wheat: 916 tonnes or 0.1% of Queensland production;
- Sorghum: 227 tonnes (less than 0.1% of Queensland production); and
- Mung beans: 201 tonnes or 0.4% of Queensland production.

In Fitzroy SA4, the key cropping commodities produced in 2010-11 were:

- Mung beans: 19,863 tonnes or 44.2% of Queensland production;
- Rice: 944 tonnes or 41.1% of Queensland production;
- Sunflower: 2,776 tonnes or 29.0% of Queensland production; and
- Chickpeas: 37,674 tonnes or 27.1% of Queensland production.

Fruit and Vegetables for Human Consumption

In 2010-11 the key fruit and vegetable crops for human consumption, grown in Livingstone Shire were:

- Pineapples: 10,466 tonnes or 12.6% of Queensland production;
- Pumpkins: 852 tonnes or 2.1% of Queensland production; and
- Sweet Corn: 250 tonnes or 1.0% of Queensland production.

In Fitzroy SA4, the key fruit and vegetables crops for human consumption in 2010-11 were:

- Grapes: 5,486 tonnes or 46.6% of Queensland production;
- Pineapples: 10,466 tonnes or 12.6% of Queensland production (all of which produced in Livingstone Shire); and
- Pumpkins: 2,697 tonnes or 6.5% of Queensland production.

Livestock

Within the Livingstone Shire, the majority of livestock identified were meat cattle, with an estimated 163,189 head in 2010-11, accounting for 1.3% of Queensland production. In Fitzroy SA4, the dominant livestock in 2010-11 were:

- Meat cattle: 1,882,737 head, accounting for 15.1% of Queensland production; and
- Pigs: 19,934 head, accounting for 3.1% of Queensland production.

19.6.4.2 Value of Production

Cropping

Within Fitzroy SA4, cotton accounted for most of the value of production at \$64.8 million but only 8.3% of the total value of cotton production in Queensland. Wheat and sorghum were also substantial contributors to the total value of production at \$50.9 million and \$33.2 million or 13.5% and 13.2% of total value, respectively.

Fruit and Vegetable for Human Consumption

In Livingstone Shire, pineapples accounted for most of the value of production at \$6.3 million, or 12.5% of the total Queensland value. Within Fitzroy SA4, grapes were the most valuable crop, with an estimated value of \$14.9 million in 2010-11 (or 46.1% of total Queensland value).

Livestock

Within both Livingstone Shire and Fitzroy SA4, cattle and calves slaughtered accounted for most livestock value in 2010-11 (accounting for 1.4% of Queensland value and 14.1% of Queensland value, respectively).

19.6.5 Socio-Economic Index for Areas

The Socio-Economic Index for Areas is an ABS summary measure of social and economic census data, and includes four indexes. The Index of Relative Socio-economic Disadvantage summarises the economic and social conditions of people and households within an area, with a lower score indicating greater disadvantage and a higher score indicating least disadvantage (ABS 2013c).

The Index of Relative Socio-economic Disadvantage for each of the chosen geographical areas is broken down into quintiles, according to their level of disadvantage in Table 19-20. The Rockhampton population is heavily skewed towards the most disadvantaged quadrants whilst the Livingstone population favours the middle quintiles.

Table 19-20 Population by index of relative socio-economic disadvantage as at 2011 census

Area	Q1 (most disadvantaged)	Q2	Q3	Q4	Q5 (least disadvantaged)
Livingstone (S)	10.0	23.7	36.8	17.9	11.6
Rockhampton (R)	35.2	24.3	19.1	12.6	8.8
Queensland	20.0	20.0	20.0	20.0	20.0
Australia	n/a	n/a	n/a	n/a	n/a

Source: ABS 2013c

19.6.6 Value of Ecosystem Services

The value of ecosystem services refers to the habitat, biological or system properties or processes of ecosystems. Ecosystem goods (such as food) and services (such as waste assimilation) represent the benefits human populations derive, directly or indirectly, for ecosystem functions (Costanza et al. 1997). The impact to ecosystems services is identified in Section 19.7.2.6.

19.7 Potential Impacts

19.7.1 Social Impacts

Potential social impacts, both adverse and beneficial, have been identified during the social impact assessment including:

- Opportunities for employment;
- Potential business opportunities;
- Transport and site access issues;
- Exclusion of the community;
- Disruption to community cohesion; and
- Increased demand on community services.

The abovementioned impacts are discussed in the following sections.

19.7.1.1 Opportunities for Employment

The Project will have an approximate construction workforce of 200 people during the peak construction period. A proposed workforce of between 250 to 500 employees will be required during the mine operations. Mackay has a large pool of mine contractors and an established capacity to serve the coal mining industry. Rockhampton will also form a large make up of employees expected to service the Project. Opportunities for employment will also exist for smaller towns, such as Marlborough, St Lawrence and Sarina. Employment for local Indigenous members, women and people with disabilities will be a focus for Central Queensland Coal.

Employment of local people will directly benefit household income and provide indirect community benefits through higher wages. For those employed or contracted during the Project's phases, it is expected that they will experience a change in the standard of living and increase in their economic resilience. Hiring of local peoples may boost the morale and assurance of communities.

19.7.1.2 Potential Business Opportunities

Local procurement will generate local business activity and generate indirect employment. A significant proportion of the goods and services are expected to be sourced from Mackay and Rockhampton, and will therefore benefit Central Queensland. Central Queensland Coal will encourage local business opportunities and look for ways to form partnerships that provide good social and economic outcomes.

There is the potential for the Project to generate significant employment and supply chain demand in the region. During the construction and operational phase, the Project is likely to result in the need for goods supply and resources.

19.7.1.3 Transport and site access issues

The construction and operational workforce will be a combination of local workers and drive-in drive-out (DiDo) workers. The skill of these workers will vary depending on the stage of development. The Project site is easily accessible via major roads including the Bruce Highway. For workers living in Mackay, Rockhampton or similar distances away from the Project, the drive to the Project could become tedious to those commuting regularly, especially after working shifts.

The Project will utilise a DiDo workforce and as such, air movements are expected to be infrequent. The increase in air movements associated with the project are anticipated to be minor and be within existing capacity of the airports. The Project is anticipated to have a negligible socio-economic impact on the community through any increased usage of the regional airports.

Accommodation will be provided in surrounding townships of Marlborough, Ogmoo, St Lawrence and Clairview. Should additional accommodation be required this will be located outside the mining lease. For further details refer to Chapter 3 – Description of the Project.

19.7.1.4 Exclusion of the Community

Surrounding property owners and landholders will be potentially impacted by mining construction and operation activities such as:

- Disruptions to farm operations during the lifetime of the mine and decreased investment in the land;
- Increased traffic potentially impacting access and operations on properties;
- Stress, particularly during the lead up to construction when there is greater uncertainty over what lies ahead;
- A change to the character of the area, and particularly, a change to agricultural land uses and the landscape of the region with consequential effects on property owners' attachment to place; and
- Potential dust, noise, vibration and visual amenity impacts.

19.7.1.5 Disruption to Community Cohesion

The reported offences rate in the LSC is below the rate for Queensland. For employees and contractors potentially residing in the surrounding townships of Marlborough, Ogmoo, St Lawrence and Clairview, the issues of interaction between workers and the community, and alcohol consumption leading to community impacts have the potential to result in disharmony and disruption to the community cohesion as well as result in reported and un-reported offences.

19.7.1.6 Increased Demand on Community and Essential Services

Health Services

Due to the nature and location of the workforce, increased demand in community and essential services is not expected to be significant. The use of residents is not expected to change the current demand for community health services in the region. There may be a minor increase to the demand for community services, including medical health services that occur because of the Project. Minor illnesses and injuries will be treated onsite and at the Project's first aid facility which will not increase demand on health services. In extreme cases, emergency evacuation of patients may be

required from the Project to Rockhampton or Mackay for more specialist healthcare provision. This increased demand will draw on the existing supply of such services for each hospital but is expected to be infrequent.

Education Services

Livingstone Shire has 13 primary schools and three secondary schools, it is anticipated that any additional demand will be able to be accommodated by these educational services. Rockhampton has 18 private schools, 22 state primary schools, four state high schools, and the Central Queensland University (Rockhampton Regional Council 2017c), it is expected that any further demand because of the Project will be accommodated by these educational services.

Emergency Services

There is unlikely to be significant increased demand on ambulance and paramedic services within the study area during the Project. In terms of emergency services such as ambulances, police and fire services it is expected that it will take more than an hour to access the site via road. It is possible that medical emergencies may require the local or regional air rescue services such as the Royal Flying Doctor Service or Emergency Management Queensland.

The Marlborough Police Station's operating hours varies whereas the St Lawrence Station currently operates on Tuesday from 9 am to 1 pm. Neither of these stations can be relied upon for emergency services and it is expected emergency personnel will come from Rockhampton.

19.7.2 Economic Impacts

19.7.2.1 Project Expenditures

Capital expenditure for the Project is anticipated to total \$242.68 million, comprising approximately:

- \$106.78 million of Project expenditures within Central Queensland;
- \$49.75 million of Project expenditures within the rest of Queensland;
- \$43.68 million of Project expenditures interstate; and
- \$42.47 million of Project expenditures overseas.

Project expenditures made overseas represent direct imports and as such do not make an economic contribution at a state, regional or national level, and hence are excluded from the subsequent impact analysis.

Capital expenditures were subsequently collated into respective industrial categories and used as inputs to the estimation of the regional, state and national stimulus generated by the construction stage of the Project. Please see Appendix A10a – Economic Technical Report for a breakdown of the anticipated capital expenditure within Central Queensland, the rest of Queensland, nationally and internationally.

19.7.2.2 Regional, State and National Economic Impacts During Construction

The Project's contribution to output, household income, employment and value added during the construction phase for the Central Queensland, rest of Queensland and national economy is discussed below. Capital expenditures are anticipated to incur for the first 16 years of the Project.

Output

Output or consumption effects are anticipated to be concentrated in year 1, with the Central Queensland regional likely to experience the most significant stimulus. In year 1, output or consumption effects for Central Queensland, state and national economy are estimated at:

- Central Queensland: total output contribution of \$119.11 million, comprising \$66 million in direct contribution and \$53.11 million of indirect contributions;
- Rest of Queensland: total output contribution \$56.99 million, comprising \$30.75 million in direct contribution and \$26.24 million of indirect contributions; and
- National: total output contribution of \$53.26 million, comprising \$27 million in direct contribution and \$26.26 million of indirect contributions.

Output effects are anticipated to be concentrated within the construction sector, with the manufacturing sector also benefitting from significant stimulus at the regional, state and national level.

Household Income

Household income effects are anticipated to peak in year 1, with the Central Queensland region likely to record the most significant stimulus. In year 1, household income effects for the Central Queensland region, state and national economy are estimated at:

- Central Queensland: total output contribution of \$24.15 million, comprising \$13.66 million in direct contribution and \$10.49 million in indirect contribution;
- Rest of Queensland: total output contribution of \$12.60 million, comprising \$6.36 million in direct contribution and \$6.24 million of indirect contributions; and
- National: total output contribution \$11.98 million, comprising \$5.59 million in direct contribution and \$6.39 million of indirect contributions.

Within all regions under review, household income effects are anticipated to be highest within the construction sector.

Employment

The employment effects of the construction phase are expected to peak in year 1. In year 1, employment effects for Central Queensland, state and national economy are estimated at:

- Central Queensland: total employment contribution of 225 FTEs, comprising a direct contribution of 93 FTEs and an indirect contribution of 132 FTEs;
- Rest of Queensland: total employment contribution of 127 FTEs, comprising a direct contribution of 43 FTEs and an indirect contribution of 84 FTEs; and
- National: total employment contribution of 123 FTEs, comprising a direct contribution of 38 FTEs and indirect contribution of 85 FTEs.

Within the Central Queensland region, the rest of Queensland and at the national level, employment effects are anticipated to be highest within the manufacturing sector, with the construction sector also experiencing significant employment effects.

Value Added

Value added impacts are anticipated to peak in year one, with Central Queensland likely to experience the most significant stimulus. In year one, value added effects for the Central Queensland region, state and national economy are estimated at:

- Central Queensland: total value added contribution of \$42.98 million, comprising direct contribution of \$23.55 million and an indirect contribution of \$30.73 million;
- Rest of Queensland: total value added contribution of \$21.43 million, comprising direct contribution of \$10.97 million and an indirect contribution of \$10.46 million; and
- National: total value added contribution of \$20.36 million, comprising \$9.63 million in direct contribution and \$10.72 million of indirect contributions.

Within Central Queensland, the rest of Queensland and at the national level, value added effects are anticipated to be highest in the construction sector.

19.7.2.3 Economic Impacts of Operation

An overview of the Project's contribution to output, household income, employment and value added during the operational phase for the Central Queensland region is discussed in the following sections.

The Project is anticipated to have an operational life of 20 years. Total impacts of the operational phase of the Project are anticipated to increase steadily between years one and ten. The sharp increase in activity that is anticipated to occur during years eleven and twelve of the Project, will result in a substantial increase in total contributions to the regional economy.

The effects that these activities will have on the state and national economy will also be measurable, though will not be discussed in this section (see Appendix A10a – Economic Technical Report for further information).

Output

Output contributions are anticipated to peak in year twelve and are estimated at \$1,096.55 million, comprising \$600.25 million in direct contribution and \$496.30 million of indirect contributions.

Household Income

Household income contributions are anticipated to peak in year twelve and are estimated at \$255.57 million, comprising \$158.86 million in direct contribution and \$96.71 million in indirect contribution.

Employment

Employment contributions are also anticipated to peak in year twelve, comprising a total employment contribution of 3,024 FTEs. This includes a direct contribution of 1,900 FTEs and an indirect contribution of 1,124 FTEs.

Value Added

Value added effects of the Project are anticipated to peak in year twelve, with the total contribution amounting to \$461.75 million. This includes a direct contribution of \$268.30 million and an indirect contribution of \$193.45 million.

19.7.2.4 Value of Coal Exported

The Project is anticipated to produce a total of 36.93 million tonnes of semi-soft coking and high-grade thermal coal over the life of the Project. Approximately 28.11 million tonnes of the production (~76%) will be semi-soft coking coal and 8.82 million tonnes will be high-grade thermal coal – anticipated to only be produced in years 9 and 10 of the Project.

The exchange rate outlook for Australia is anticipated to remain, at least in the medium term, at approximately ~US\$0.76. The price of semi-soft coking coal is anticipated to decrease from its current high of US\$160 per tonne to approximately US\$125 per tonne in the short to medium term. The price of high grade thermal coal is anticipated to remain at approximately US\$95 per tonne for the medium term.

Thus, based on these anticipated prices and exchange rate, the total export value of the coal produced is estimated to be in the order of AUD\$4.41 billion of the life of the Project. Assuming Queensland coal mining royalty rates remain unchanged, this will yield royalties of approximately \$525.26 million over the life of the Project.

It is pertinent to note that both coal prices and exchange rates are subject to fluctuations and shocks, so these estimates are intended to be indicative only, based on the current trade environment.

19.7.2.5 Opportunity Cost of the Project

The opportunity cost of any given project is generally defined as the next best alternative use of resources that will be foregone because of the Project. Thus, in the Central Queensland region, the most common economic use of land is for cattle grazing.

The production parameters for cattle grazing in the Central Queensland region are typically:

- Average production cycle: ~three years;
- Slaughter value: ~\$1,500 per head;
- Stocking rate: ~two head per hectare; and
- Gross margin: ~15%.

The Project is estimated to have a total mine lease area of approximately 3,027.74 hectares. Hence, the opportunity cost of the Project is the value of the lost production of cattle grazing from the impacted area. Therefore, the opportunity cost of the Project in terms of annual output foregone and annual gross margin foregone were the land utilised for cattle grazing is estimated to be approximately \$3.03 million and \$0.45 million, respectively. This analysis assumes that cattle could have been grazed over the entire mine lease area.

19.7.2.6 Ecosystem Services Foregone

The Project is likely to disrupt and adversely impact a regional ecosystem which provides a habitat for a number of species, ranging from Least Concern to Endangered. The total regional ecosystem impacted by the Project is estimated to be 138.21 hectares, consisting of:

- Least concern: 35.05 ha;
- Of Concern: 102.76 ha; and
- Endangered: 0.4 ha.

There will also be 1,093.4 hectares of non-remnant vegetation disturbed by the Project.

Details on the regional ecosystem impacted by the Project is provided in Table 19-21.

Table 19-21 Extent of regional ecosystem impact

RE Code	VM Act Status	Description	Impacted area (ha)
11.3.4	Of Concern	<i>Eucalyptus tereticornis</i> woodland to open forest. Other tree species that may be present and locally dominant include <i>E. camaldulensis</i> , <i>Corymbia tessellaris</i> , <i>E. coolabah</i> , <i>C. clarksoniana</i> , <i>E. populnea</i> or <i>E. brownii</i> , <i>E. melanophloia</i> , <i>E. platyphylla</i> or <i>Angophora floribunda</i> . <i>E. crebra</i> and <i>Lophostemon suaveolens</i> may be locally dominant. Suitable primary feed for koalas - known to occur nearby.	7.92
11.3.25	Least Concern	<i>Eucalyptus camaldulensis</i> or <i>E. tereticornis</i> open forest to woodland. Other tree species such as <i>Casuarina cunninghamiana</i> , <i>E. coolabah</i> , <i>Melaleuca bracteata</i> , <i>Melaleuca viminalis</i> , <i>Livistona</i> spp. (in north), <i>Melaleuca</i> spp. and <i>Angophora floribunda</i> are commonly present and may be locally dominant. Suitable primary feed for koalas - known to occur nearby.	28.1
11.4.2	Of Concern	<i>Eucalyptus populnea/brownii</i> or <i>E. melanophloia</i> +/- <i>Corymbia dallachiana</i> +/- <i>C. tessellaris</i> +/- <i>E. crebra</i> +/- <i>E. platyphylla</i> woodland. Squatter Pigeon (<i>Geophaps scripta</i>) may forage in this habitat.	94.84
11.4.9	Endangered	Open forest, occasionally woodland, dominated by <i>Acacia harpophylla</i> usually with a low tree mid-storey of <i>Terminalia oblongata</i> and <i>Eremophila mitchellii</i> . <i>Casuarina cristata</i> sometimes replaces <i>Acacia harpophylla</i> in the overstorey and <i>Lysiphyllum cunninghamii</i> sometimes co-dominates. Other low tree or shrub species such as <i>Alectryon diversifolius</i> , <i>Carissa ovata</i> , <i>Pittosporum spinescens</i> , <i>Ehretia membranifolia</i> , <i>Geijera parviflora</i> and <i>Flindersia dissosperma</i> may occur in the mid-storey or low shrub layer. Ornamental Snake (<i>Denisonia maculate</i>) may forage in this habitat.	0.4
11.10.7	Least Concern	<i>Eucalyptus crebra</i> and/or <i>E. melanophloia</i> +/- <i>E. populnea</i> shrubby woodland. <i>Eucalyptus melanophloia</i> and/or <i>E. crebra</i> predominate and form a distinct but open canopy. <i>E. populnea</i> is commonly present and may be locally dominant particularly on lower slopes. Greater Glider (<i>Petauroides volans</i>) known to occur nearby. Squatter Pigeons may forage in this habitat.	6.84
11.11.15a	Least Concern	<i>Eucalyptus crebra</i> +/- <i>Corymbia erythrophloia</i> +/- <i>E. populnea</i> +/- <i>E. melanophloia</i> +/- <i>C. tessellaris</i> +/- <i>C. clarksoniana</i> woodland to open woodland often with a shrubby layer. <i>Eucalyptus exserta</i> and <i>E. platyphylla</i> present in central coastal part of bioregion. Greater Glider is known to occur nearby.	0.11
-	-	Non-Remnant Vegetation	1,065.80
Total			1,204.21

Source: CDM Smith, Department of Environment, Land and Water

The loss of habitat areas can be categorised as a non-market disbenefit. This assessment uses the 'benefit transfer' technique, in which valuations obtained from primary research conducted for other projects is applied to the project in question.

Environmental values for habitats affected by development can be categorised as being either:

- Use values - values derived from physical use of the environmental resource, including commercial activities, such as commercial fishing or tourism, and non-commercial activities, such as recreation; and
- Non-use values, which refer to:
 - Ecological function values: the value of the ecological services or functions provided by an environmental resource, such as provision of fish habitats and biodiversity
 - Option values: the benefit derived from maintaining the right to use the resource without necessarily doing so
 - Quasi-option values: the benefit derived from delaying a decision to develop an environmental resource to obtain better information regarding the impacts of that development on the resource
 - Vicarious use values: the value derived by individuals in knowing that others are using the environmental resource
 - Bequest values: the value of maintaining environmental values for the benefit of future generations
 - Existence values: the value derived by members of the community from the knowledge that areas of environmental value exist.

This assessment adopts the benefit transfer approach utilising parameters values identified in Costanza et al (1997), which estimates the ecosystem services value of forest communities at approximately \$2,100 per hectare per year and of grasslands or rangelands at approximately \$500 per hectare per year (adjusted to 2017 Australian dollars- rounded to the nearest \$100).

Based on a total impacted area of 1,093.4 hectares of directly impacted grassland and 138.21 hectares of directly impacted woodland habitat, the Project is anticipated to have an adverse ecosystem service impact of \$0.84 million per annum, which would have a capitalised value of between \$13.95 million per annum and \$20.92 million per annum based on test discount rates of 6% and 4% respectively.

19.7.3 Summary of Beneficial and Adverse Impacts

19.7.3.1 Beneficial Impacts

The Project is anticipated to result in a range of beneficial impacts including:

- Economic stimulus to the regional, state and national economies during the construction and operational phases of the Project;
- Export revenues from coal produced across the life of the mine is estimated to be in the order of \$4.41 billion, which assuming royalty rates remain unchanged would yield royalties of approximately \$525.26 million over the life of the mine;

- Increased employment opportunities within Central Queensland which would help to reverse the trend of increasing unemployment within the region; and
- Opportunities for suppliers in the Central Queensland region to support the construction and operation of the Project.

19.7.3.2 Adverse Impacts

The Project has the potential to result in the following adverse impacts:

- Opportunity cost of the Project in terms of foregone output from cattle grazing in the order of \$3.03 million per annum which represents \$0.45 million in gross annual margin foregone;
- Loss of ecosystem services within areas directly impacted by the mine's operation with a value estimated at \$0.84 million per annum, which would have a capitalised value in the order of \$13.95 million and \$20.92 million per annum, based on directly impacted woodland and grassland habitats of 1,231.61 hectares;
- Tightening of the local and regional labour market potentially resulting in increased labour costs;
- Potential for skills shortages;
- Potential for inflationary pressure in the Central Queensland housing market;
- Potential for inflationary pressure in the Central Queensland commercial and industrial property markets;
- Increased burden on Central Queensland infrastructure and services; and
- Disruption to community cohesion.

19.8 Mitigation Measures

The Project is anticipated to result in a range of adverse economic impacts, which will largely be offset by opportunities created by the Project. These adverse economic impacts will likely only be experienced during the life of the Project which is expected to be 20 years. Nonetheless, management of these risks are required to mitigate any potential negative economic consequences. These consequences could potentially entail:

- The opportunity cost of the Project in terms of lost cattle grazing opportunities (although these will largely be offset by the improvement of the economic conditions and opportunities);
- Tightening of the local and regional labour market resulting in increased labour costs unless other skilled labour is promoted in the area through traineeships etc.;
- Potential short term worsening of skills shortages in the construction sector during the construction phase (although not the direct linked to the Project, the issue will generally be apparent across the region);
- Potential localised inflation in residential, commercial and industrial property markets; and
- Increased burden on local and regional infrastructure, particularly during the construction phase.

The potential adverse impacts requiring mitigation measures are discussed below.

19.8.1 Potential Localised Inflation

The Project has some potential to result in increased housing costs within its host region, particularly during the construction phase. A range of measures to address this issue will be developed through the Project's social impact management strategies.

It is understood that the Project will potentially include a workers' camp on the Mamelon property as an overflow for those non DiDo personnel, thus the potential for inflationary pressures in the housing market will be mitigated to some degree.

19.8.2 Increased Labour Costs

The Project has the potential to increase labour costs within the region, particularly during the construction phase. To mitigate this potential impact the following actions will be considered:

- Work with Queensland government agencies, Queensland Resource Council, local government and other proponents to develop programs that assist local businesses retain workers and back fill any vacancies that may be created because of the Project. Principally, these programs would seek to encourage locals to re-enter the workforce, upskill the unemployed or underemployed and assist local businesses to retain staff;
- Engagement with Construction Skills Queensland to identify potential measures to increase the capacity of local job seekers to develop relevant skills for construction and mining; and
- Identification of potential funding opportunities and training programs that local training providers can access to increase the available pool of skilled labour in the region.

19.8.3 Local and Regional Infrastructure

The Project will be providing its own electricity, sewerage treatment, water treatment (potable and contaminated sources), stormwater infrastructure and immediate site access road. The Project will likely contribute to increased traffic volumes on the road network, as well as increased utilisation of the North Coast Railway Line for the haulage of coal to Dalrymple Bay Coal Terminal.

19.8.4 Management Strategies

A management plan framework has been developed for the social impacts associated with the Project. This framework is referred to as the Social Impact Strategy. The Social Impact Strategy will involve indicative frameworks for the management of:

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

The management strategies will support ongoing management of the social change processes and social impacts and benefits associated with the Project. In recognition of the changing nature of

social impacts and benefits over the life of the Project, the management strategies will be built on an adaptive management approach and will include regular reviews and updates. It is anticipated that a comprehensive review of management strategies will be undertaken in consultation with stakeholders every five years in line with the release of ABS Census data.

The management strategies are summarised below

Community and Stakeholder Engagement – The main purpose of the Stakeholder and Community Engagement Strategy is to develop working relationships with each relevant stakeholder. The strategy will ensure that members of the communities and stakeholders are adequately informed and are aware of communication channels should they have any complaints, issues, questions or comments. The strategy will also include the processes for ongoing consultation and the mitigation and management actions. Engagement will continue throughout the EA period and will continue for the life of the Project. After the ML has been granted, the focus of the consultation will be on developing more details within the Stakeholder and Community Engagement Strategy. The indicative framework for this strategy is shown at Table 19-22.

Table 19-22 Community and Stakeholder Engagement Strategy framework

Stakeholder	Interest area	Consultation Method
Landholders		
Within the Project area	Implementation of property management plans Landholder compensation agreement	Face to face meetings
Neighbouring	Impact management	
Indigenous Groups		
Relevant Indigenous parties	Employment, training and economic participation strategies for Indigenous people as part of construction and operational phases.	Face to face meetings
Indigenous businesses	Strategies for engaging with Indigenous businesses to encourage their involvement in the supply chain for the mine.	
Local Communities		
Marlborough, Ogmores, St Lawrence, Claireview	Project schedule, accommodation, employment and business opportunities within the region Supply chain opportunities within the region	Face to face meetings Media – advertisements in Local newspapers Project website
Regional Councils		
Livingstone Shire Council	Project schedule, accommodation, employment and business opportunities within the region Supply chain opportunities within the region	Face to face meetings Media – advertisements in Local newspapers Project website
Rockhampton Regional Council		
State Government		
DSD	Management Plan development	Face to face meetings
DATSIP	Employment, training and economic participation strategies for Indigenous people as part of construction and operational phases. Strategies for engaging with Indigenous businesses to encourage their involvement in the supply chain for the mine.	
QPS	Management of Project impacts on service provision and infrastructure. Further detailed Information on: <ul style="list-style-type: none"> ▪ Size of Workforce; ▪ Ramp-up / Ramp-down timeframes; ▪ DIDO arrangements; ▪ Roster arrangements; 	

Stakeholder	Interest area	Consultation Method
	<ul style="list-style-type: none"> ▪ Location of workforce; and ▪ The number of wide loads. <p>The assessment of potential impacts and risk. This would be extended to include consultation regarding the development of Emergency and Risk Management Plans.</p>	
Queensland Fire and Emergency Services	The assessment of potential impacts and risk. This would be extended to include consultation regarding the development of Emergency and Risk Management Plans.	
Queensland Ambulance Service		
Local and District Disaster Management Groups	Consultation in relation to the development of these Emergency and Risk Management Plans to ensure there is no conflict with and / or place unnecessary burdens on existing disaster management arrangements.	
Queensland Health	Management of Project impacts on service provision and infrastructure, including the Rockhampton Hospital.	
Community Groups		
Local community groups	Project schedule, accommodation, employment and business opportunities within the region. Supply chain opportunities within the region.	Face to face and local meeting opportunities

Workforce Management - The Workforce Management Strategy is to attract and maintain a diverse workforce from the local and regional areas across the life of the Project.

The Workforce Management Strategy will focus on recruitment of people at a local, regional, and then state level, and will include policies regarding employment of indigenous people and other disadvantaged groups.

The Workforce Management Strategy will include (but not be limited to):

- Central Queensland Coal commitment is communicated and integrated within the procurement strategies and procedures of the company and within its supply chains;
- A Workforce Recruitment and Management Strategy; and
- A Workforce Behaviour Code of Conduct.

The indicative framework for this strategy is shown at Table 19-23.

Table 19-23 Workforce Management Strategy framework

Workforce Management Strategy	
Central Queensland Coal Commitment	<p>Central Queensland Coal and its contractors will encourage local and regional residents to seek employment opportunities at the Project to assist in staff and crew retention and strengthen the local communities and their economies.</p> <p>Central Queensland Coal and its contractors will enhance employment opportunities for all members of the community including underrepresented groups by providing education, training, skills development and employment organisations with regular updates about workforce requirements.</p> <p>To the extent practicable, contractors with a commitment to implementing skills and training programs will be selected for contracts.</p>

Workforce Management Strategy	
Objective	To attract and maintain a well-trained and highly skilled workforce from the Livingstone Shire Council and Rockhampton Regional Council areas across the life of the Project. To enhance workforce retention rates, particularly retention rates of the resident workforce from the local Council areas. To support the employment, retention and career development of a workforce, guided by inclusive gender and diversity policies.
Content	The Workforce Management Strategy will include (but not be limited to): <ul style="list-style-type: none"> ▪ Central Queensland Coal commitment is communicated and integrated within the procurement strategies and procedures of the company and within its supply chains; ▪ A Workforce Recruitment and Management Strategy; and ▪ A Workforce Behaviour Code of Conduct.
Key Stakeholders	To be identified in consultation with local Councils and DSD.
Impacts / benefits to manage	To be identified with stakeholders; however, the following are provided as a guide to begin discussions: <ul style="list-style-type: none"> ▪ Employment opportunities in the local region; ▪ Change in the standard of living (associated with wages) and flow on changes to housing; and ▪ Changes to employment in other industries in the regions.

Local Business and Industry Content Strategy – This strategy will support businesses in the local and broader regional areas across the life of the Project. The plan will promote and implement fair and equitable access for businesses in the LSC and RRC and Mackay region, to supply chain tendering opportunities associated with the Project.

The Local Business and Industry Content Strategy will include (but not limited to):

- Central Queensland Coal commitment is communicated and integrated within the procurement strategies and procedures of the company and within its supply chains;
- Outline how Central Queensland Coal will engage with industry across the local and broader regional areas using existing methods and will promote procurement opportunities to local industry (including effective communication of scope of works and tender opportunities) and promote capability requirements to local industry
- Identify capable industries within the local and broader regional areas; and
- Engage with contractors or subcontractors based on the most competitive tender proposal, that shall include (amongst other things) consideration of direct and indirect cost factors, past performance, reliability, maintainability, innovation, whole-of-life costs, value, safety compliance, environmental sustainability performance, financial capability, and supply chain reliability.

The indicative framework for this strategy is shown at Table 19-24.

Table 19-24 Local Business and Industry Content Strategy

Local Business and Industry Content Strategy	
Central Queensland Coal Commitment	To provide full, fair and reasonable opportunity for capable local industry to compete for the supply of goods and services for the Project.
Objective	To support businesses in the local region across the life of the Project. To promote and implement fair and equitable access for businesses, in the local region to supply chain tendering opportunities associated with and across the life of the Project.

Local Business and Industry Content Strategy	
Content	<p>The Local Business and Industry Content Strategy will include (but not be limited to):</p> <ul style="list-style-type: none"> ▪ Central Queensland Coal commitment is communicated and integrated within the procurement strategies and procedures of the company and within its supply chains; ▪ Outline how Central Queensland Coal will engage with and continue to engage with, industry across the local region using existing methods and will: <ul style="list-style-type: none"> – promote procurement opportunities to local industry (including effective communication of scope of works and tender opportunities) – promote capability requirements to local industry ▪ Identify capable industries within the local region; and ▪ Engage with contractors or subcontractors based on the most competitive tender proposal, that shall include (amongst other things) consideration of direct and indirect cost factors, past performance, reliability, maintainability, innovation, whole-of-life costs, value, safety compliance, environmental sustainability performance, financial capability, and supply chain reliability.
Key Stakeholders	To be identified in consultation with local Councils and DSD.
Impacts / benefits to manage	<p>To be identified with stakeholders; however, the following are provided as a guide to begin discussions:</p> <ul style="list-style-type: none"> ▪ Change in business opportunities in the local region; and ▪ Access to industry portals and their requirements.

Health, Social, Family and Community Wellbeing Strategy – This strategy aims to proactively manage any change in demand on government and community provided services and facilities from Project related workforce (residential and non-residential) and their families. The plan looks to optimise positive interactions between the non-residential workforce and the local community and support a safe and secure environment for the Project workforce (residential and non-residential) and their families within the local and broader region.

The Strategy will include (but not be limited to):

- Central Queensland Coal commitment is communicated and integrated within the procurement strategies and procedures of the company and within its supply chains;
- Development and implementation of the Project Stakeholder and Community Engagement Plan to ensure members of the communities that live in the local LSC and RRC regions, either on a temporary or permanent basis are adequately informed and are aware of communication channels in case they have any issues, complaints, questions or comments;
- Encourage participation in and support for the LSC and RRC community planning processes and outcomes;
- Working with community and emergency service providers to monitor types of services and demand to ensure any change predicted or caused by the Project's workforce and their families can be managed appropriately; and
- The governance regime of a sponsorship and donations program.

The Social Impact Strategy will be completed in consultation with the Coordinated Project Delivery Division in the Office of the Coordinator-General, Department of State Development prior to the commencement of construction. The Strategy will be developed in accordance with the current

Coordinator-General's *Social impact assessment guideline*. The indicative framework for this strategy is shown at Table 19-25.

Table 19-25 Health, Social, Family and Community Wellbeing Strategy

Health, Social, Family and Community Wellbeing Strategy	
Central Queensland Coal Commitment	Central Queensland Coal workers and the families to be valued members of the communities they live in, with a focus on Marlborough, Ogmore, St Lawrence, Claireview and other towns / communities in the LSC and RRC areas.
Objective	Be aware of any change in demand on government and community provided services and facilities from Project related workforce and their families. To optimise positive interactions between any non-residential workforce and the local community. To support a safe and secure environment for the Project workforce and their families within the region.
Content	The Health and Community Wellbeing Plan will include (but not be limited to): <ul style="list-style-type: none"> ▪ Central Queensland Coal commitment is communicated and integrated within the procurement strategies and procedures of the company and within its supply chains; ▪ Development and implementation of the Project Stakeholder and Community Engagement Strategy to ensure members of the local community are adequately informed and are aware of communication channels in case they have any issues, complaints, questions or comments; ▪ To encourage participation in and support for the Livingstone Shire and Rockhampton Regional Councils community planning processes and outcomes; ▪ Working with community and emergency service providers to monitor types of services and demand to ensure any change predicted or caused by the Project's workforce and their families can be managed appropriately; and ▪ The governance regime of a sponsorship and donations program.
Key Stakeholders	To be identified in consultation with local Councils and DSD.
Impacts / benefits to manage	To be identified with stakeholders, however the following are provided as a guide to begin discussions: <ul style="list-style-type: none"> ▪ Changes in demand for health and emergency services, community services and facilities and transport networks ▪ Changes in the social identity of the local community ▪ The Health, Social, Family and Community Wellbeing Strategy will need to be closely integrated with the other environmental management plans, such as: <ul style="list-style-type: none"> – Traffic – Noise and vibration

19.9 Dispute Resolution

Central Queensland Coal is committed to work with anyone who is impacted by the Project making a complaint or raising a grievance in a timely, respectful and competent manner.

A company representative will be responsible for community liaison, in this regard and will:

- Assist Central Queensland Coal in managing the interface between the Project, stakeholders and the community; and
- Be the first point of contact for managing complaints, enquiries and / or comments in relation to the Project.

The Central Queensland Coal representative will be responsible for:

- Coordinating a response to any complaints, enquiries and / or comments received; and
- Monitoring monthly the frequency and number of complaints received.

Central Queensland Coal will develop a complaints and grievance procedure for receiving, managing, investigating and responding to community or stakeholder grievances.

Complaints and grievances about the Project will be able to be lodged:

- In writing or in person to identified staff members;
- By e-mail; and
- By phone.

Any employee or contractors receiving a complaint will record the details on a Complaint Form. The complaints form will include sections for:

- Name, address and contact telephone number for the complaint;
- Nature and details of the complaint; and
- Date and time the complaint was received.

The completed Complaints Form will be forwarded to the company representative in a timely manner. The person taking the complaint is to inform the complainant in a timely manner after receiving the initial complaint that (initial response):

- The complaint has been recorded;
- Status of the complaint; and
- When a formal reply will be expected to be provided.

The following processes will apply to the investigation, resolution and reporting of complaints received:

- Upon receiving the Complaint Form, an appointed company officer shall investigate the cause of the complaint and liaise with management in developing an appropriate response;
- An initial response to the complainant acknowledging the receipt of the complaint and advising the complainant of the status of the investigation is to be provided as soon as possible upon receiving the complaint;
- The appointed Central Queensland Coal representative shall address the complaint and communicate a full response to the complainant in an appropriate medium within the timeframe in the initial response;
- The full complaint response and any identified action will be recorded in the Complaints Register to be developed for the Project;
- The action plan to correct any valid issues which lead to the complaint will be implemented as soon as practicable.

- Action(s) will be monitored by the appointed Central Queensland Coal representative to ensure they are implemented satisfactorily.

Once the Central Queensland Coal representative is satisfied the action(s) have been completed, they will record this on the Complaints Form and the Complaints Register.

19.10 Qualitative Risk Assessment

A qualitative risk assessment associated with the potential social and economic impacts is summarised in Table 19-26. An analysis of initial risk, without mitigation, was considered for each potential impact. The residual risk considers the implementation of mitigation and management measures.

Table 19-26 Qualitative risk assessment

Issue and associated Project phase	Potential impacts	Potential risk	Mitigation measures	Residual risk
Positive Impacts				
Economic stimulus to the regional economy during construction and operation	<ul style="list-style-type: none"> ▪ Regionally based Project expenditures during the construction phase are estimated to make contributions to GRP at an average of \$4.02 million per year over years 1 to 16, including \$2.05 million of direct value added; and ▪ Regionally based Project expenditures during the operation phase are estimated to make contributions to GRP at an average of \$94.22 million per year over the life of the Project, including \$54.74 million of direct value added. 	Extreme	<ul style="list-style-type: none"> ▪ No mitigation measures proposed given the potential impact is positive. 	Extreme
Economic stimulus to the state economy during construction and operation	<ul style="list-style-type: none"> ▪ State based Project expenditures during the construction phase are estimated to make contributions to GRP at an average of \$2.17 million per year over years 1 to 16, including \$1.11 million of direct value added; and ▪ State based Project expenditures during the operation phase are estimated to make contributions to GRP at an average of \$22.19 million per year over the life of the Project, including \$13.69 million of direct value added. 	High	<ul style="list-style-type: none"> ▪ No mitigation measures proposed given the potential impact is positive. 	High
Economic stimulus to the national economy during construction and operation	<ul style="list-style-type: none"> ▪ Project expenditures incurred interstate during the construction phase are estimated to make contributions to GRP at an average of \$2.06 million per year over years 1 to 16, including \$15.58 million of direct value added; and ▪ Project expenditures incurred interstate during the operation phase are estimated to make contributions to GRP of \$464.84 million over the life of the Project, including \$273.72 million of direct value added. 	High	<ul style="list-style-type: none"> ▪ No mitigation measures proposed given the potential impact is positive. 	High
Increased regional supply chain and employment opportunities throughout construction and	<ul style="list-style-type: none"> ▪ The Project is anticipated to generate additional regional supply chain activity. The volume of this activity is represented by the output measure. During the operational phase of the mine, total output impacts, pertaining to the Central Queensland region, are 	Extreme	<ul style="list-style-type: none"> ▪ No mitigation measures proposed given the potential impact is positive. 	Extreme

Issue and associated Project phase	Potential impacts	Potential risk	Mitigation measures	Residual risk
operation	estimated at an average of \$223.7 million per annum, including \$122.5 million in direct impacts. <ul style="list-style-type: none"> ▪ The employment support generated by this local supply chain activity is estimated at an average of 617 FTEs per annum, including 390 direct FTEs per annum. 			
Adverse Impacts				
Disruption to community cohesion	Surrounding property owners and landholders in the surrounding areas will be potentially impacted by mining construction and operation activities such as: <ul style="list-style-type: none"> ▪ Disruptions to farm operations during the lifetime of the mine and decreased investment in the land; ▪ Increased traffic potentially impacting access and operations on properties; ▪ Stress, particularly during the lead up to construction when there is greater uncertainty over what lies ahead; ▪ A change to the character of the area, in particular a change to agricultural land uses and the landscape of the region with consequential effects on property owners' attachment to place; ▪ Potential dust, noise, vibration and visual amenity impacts; and ▪ Potential issues with interaction between workers and the community. 	High	<ul style="list-style-type: none"> ▪ Any interaction with the local community will be guided by a code of conduct, which all staff and contactors must agree prior to engagement (both resident and non-resident workers); and ▪ To promote the relationship between the Project and property owners, employee and contractor induction and training will be conducted including education on land access protocol. 	Low
Increased demand on community services	<ul style="list-style-type: none"> ▪ Increased traffic and mining construction and operation activities will increase the potential demand on emergency services should any incidents occur. This will therefore increase the demand on existing police, ambulance, health and fire and rescue services. 	High	<ul style="list-style-type: none"> ▪ There will be trained first aiders and an emergency response team onsite for first response to minor injuries; and ▪ An Emergency Response Plan will be prepared in accordance with relevant legislation requirements prior to the commencement of construction. Refer to Chapter 20 – Health and Safety for further information.	Low
Opportunity cost of the Project	<ul style="list-style-type: none"> ▪ The opportunity cost of the Project in terms of alternative economic uses (i.e. beef cattle) estimated in terms of forgone output is estimated to be approximately \$3.03 	High	<ul style="list-style-type: none"> ▪ This potential impact is likely to be substituted by the economic benefits of the Project. 	Low

Issue and associated Project phase	Potential impacts	Potential risk	Mitigation measures	Residual risk
	million, which represents an average annual gross margin of approximately \$0.45 million respectively.			
Loss of ecosystem services	<ul style="list-style-type: none"> ▪ Based on a total area of 1,231.61 hectares of directly impacted woodland and grassland habitat, the Project is anticipated to have adverse ecosystem service impacts of \$0.84 million per annum, which would have a capitalised value in the order of \$13.95 million and \$20.92 million per annum based on test discount rates of 6% and 4% respectively. 	High	<p>To ensure the Project does not result in additional unforeseen direct impacts to remnant vegetation, the following measures are proposed:</p> <ul style="list-style-type: none"> ▪ Prior to construction, Project design may be further altered to avoid clearing areas of threatened vegetation communities and habitat for threatened species where possible; ▪ Vegetation located adjacent to the Project construction works will be appropriately marked to avoid unnecessary clearing / vegetation damage; ▪ The open-cut pit areas will be backfilled and rehabilitated as the mine progresses; ▪ Monitoring of vegetation health in remnant vegetation adjacent to the mining activities to identify whether indirect impacts are occurring because of dust and mine run off contamination; and ▪ Where impacts are identified, an adaptive management program will be in place to actively respond and develop remediation strategies according to the identified source of impacts. <p>Please see Chapter 14 – Terrestrial Ecology for further information.</p>	Low
Increased inflationary pressure in regional labour markets	<ul style="list-style-type: none"> ▪ The Project is anticipated to generate a significant amount of employment demand throughout its construction and operational phases. If the regional economy was facing an employment constraint this additional employment would have the potential to create inflationary pressure in the labour market. However, labour market conditions have been deteriorating at both the regional and state levels. As such, the potential for the Project to materially add to 	Low	<ul style="list-style-type: none"> ▪ A range of measures to address this issue will be addressed in the Project’s social impact management strategies; and ▪ The Project will include accommodation facilities if required, thus the potential for inflationary pressures in the housing market will be mitigated to some degree. 	Low

Issue and associated Project phase	Potential impacts	Potential risk	Mitigation measures	Residual risk
	wage inflation at a regional or state level is considered low.			
Potential for skills shortage	<ul style="list-style-type: none"> ▪ The Project is anticipated to generate a significant amount of employment demand throughout its construction and operational phases. However, the potential impact of the Project to create or contribute to a skills shortage is considered low. 	Low	<ul style="list-style-type: none"> ▪ Engage with Construction Skills Queensland to identify potential measures to increase the capacity of local job seekers to develop relevant skills for construction and mining. 	Low
Potential for inflationary pressure in local housing, commercial and industrial property markets	<ul style="list-style-type: none"> ▪ Projects that generate significant employment and supply chain demand can have impacts on local and regional property markets in the form of inflationary pressure. ▪ It is considered that the potential impact of the Project to cause significant inflationary pressure in the local property market is low. 	Low	To mitigate this potential impact, the Project will implement a Social Impact Strategy.	Low
Increased burden on local and regional infrastructure	<ul style="list-style-type: none"> ▪ The Project is likely to impact on local and regional transport infrastructure throughout its development and operation. ▪ The Project is likely to contribute to increased utilisation of the North Coast Railway Line for the haulage of coal to Dalrymple Bay Coal Terminal or coal terminals in Gladstone. ▪ The Project will also contribute to increased traffic volumes on the road network. 	Medium	<p>The Project will be providing its own:</p> <ul style="list-style-type: none"> ▪ Electricity; ▪ Sewerage treatment; ▪ Water treatment (potable and contaminated sources); ▪ Stormwater infrastructure; and ▪ Immediate site access road. <p>The only state and local infrastructure that is likely to be directly impacted by Project activities is the road networks for construction haulage and operational use (primarily construction).</p>	Medium

19.11 Conclusion

The Project has the potential to generate social and economic benefits for the region, state and nation. Key benefits of the Project identified in the social and economic assessment include:

- Economic stimulus to the regional, state and national economy during construction and operation;
- Export revenue associated with the sale of coal, which in turn will result in the payment of royalties of approximately \$525.26 million over the life of the Project; and
- Increased regional supply chain and employment opportunities throughout construction and operation.

Whilst the Project will provide social and economic benefits, the Project will also likely result in adverse impacts, including:

- Disruption to community cohesion;
- Increased demand on community services;
- Opportunity cost of the Project in terms of alternative economic uses such as beef cattle grazing;
- Loss of ecosystem services;
- Increased inflationary pressure in regional labour markets;
- Potential for skill shortages;
- Potential for inflationary pressure in local housing, commercial and industrial property markets; and
- Increased burden on local and regional infrastructure.

The adverse impacts listed above will be mitigated via the Social Impact Strategy and where possible goods and services will be sourced locally.

19.12 Commitments

In relation to social and economic impacts, Central Queensland Coal's commitments are provided in Table 19-27.

Table 19-27 Commitments – social and economic

Commitments
Stakeholder and community engagement
Implement a Stakeholder and Community Engagement Plan to ensure stakeholders and members of the community are adequately informed and are aware of communication channels in case they have any issues, complaints, questions or comments.
As a minimum, consult with: <ul style="list-style-type: none"> ▪ Directly affected and neighbouring landholders; ▪ Affected Indigenous groups; ▪ Residents and local businesses; ▪ The Livingstone Shire Council and Rockhampton Regional Council; and ▪ Relevant State government departments.
Identify ways to engage and notify affected stakeholders regarding impacts, mitigation measures and commitments.
Workforce management
Prepare and implement a Social Impact Strategy, inclusive of: <ul style="list-style-type: none"> ▪ The communication and integration of Central Queensland Coal's commitments through its procurement strategies and procedures and within its supply chain; ▪ The development and implementation of workforce recruitment and management strategies; and ▪ The development and implementation of a workforce behaviour and code of conduct.
Encourage local and regional residents to seek employment opportunities to assist in staff and crew retention and strengthen the local communities and their economies.
Enhance employment opportunities for all members of the community including under-represented groups by providing education and training, skills development.
Attract and maintain a diverse workforce from the local and broader regional community areas across the life of the Project.
Enhance workforce retention rates particularly for resident workers.
Local business and industry content
Prepare and implement local business and industry content strategies, inclusive of: <ul style="list-style-type: none"> ▪ How Central Queensland Coal will engage with industry and promote procurement opportunities and capability in the LSC and RRC areas; ▪ Identify capable industries within the LSC and RRC areas to support the Project; and ▪ Engage with contractors based on the most competitive tender proposal that shall include consideration of direct and indirect cost factors, past performance, reliability, maintainability, innovation, whole of life costs, value, safety, compliance, environmental sustainability performance, financial capability and supply chain reliability.
Support businesses in the LSC and RRC areas to encourage the ongoing development of these regions.
Promote and implement fair and equitable access to businesses in the LSC and RRC areas to supply chain opportunities associated with the Project.
Health, social, family and community wellbeing
Prepare and implement health, social, family and community wellbeing strategies, inclusive of: <ul style="list-style-type: none"> ▪ Measures to inform the community about the Project and to provide communication channels in case they have any issues, complaints, questions or comments about the Project; ▪ Measures to encourage participation in and support for the LSC and RRC planning processes and outcomes; and ▪ Measures to monitor the type and availability of emergency services' availability so that any change in demand for these services can be met because of the Project.
Manage any change in demand on government and community services and facilities.
Optimise positive interactions between the non-residential workforce and the local communities.
Support a safe and secure environment for the Project workforce.

19.13 ToR Cross-reference Table

Table 19-28 ToR Cross-reference Table

Terms of Reference	Section of the EIS
Information requirements - social	
1.1 Conduct a social impact assessment (SIA) in accordance with the Coordinator-General's <i>Social impact assessment guideline</i> (July 2013) and the Coordinator-General's <i>Social impact assessment guideline (draft)</i> (October, 2016) (or other guideline in place at the time of delivery of the SIA).	Section 19.2.4
The SIA should be developed in consultation with the Coordinated Project Delivery Division in the Office of the Coordinator-General, Department of State Development, and describe the likely social impacts (positive and negative) on affected communities.	Section 19.8.4
The proposed mitigation measures are to be discussed.	Section 19.8
Should the Strong and Sustainable Resource Communities Bill 2016 (SSRC Bill) be passed, the proponent must meet all requirements of the legislation that apply to the project.	Noted
Matters to be considered in the SIA are detailed in the following sections.	Section 19.5.1
1.2 The SIA should include:	
a) a profile of key stakeholders	
b) a social baseline study of potentially impacted communities within the SIA study area	Section 19.5.2
c) an overview of state government legislation, policies and priorities which complement the mitigation measures for the project's social impacts	Section 19.2
d) an explanation of sources used to gather information, as well as relevant analysis methods. Discuss rationale for both primary and secondary data	Section 19.4
e) a description of how the potentially impacted communities and affected stakeholders / other interested parties were engaged and consulted with during the development of the SIA	Chapter 1 - Introduction
f) identification of potential social impacts and their likely significance, including duration	Section 19.7
g) the proponent's proposed enhancement and mitigation / management measures	Section 19.8
h) details of the proponent's proposed monitoring and reporting framework	To be developed as part of the frameworks listed 19.8.4 and Section 19.9
Social impact assessment study area	
1.3 Define the project's SIA study area (including the local, district, regional and state level as relevant), taking into account the:	Sections 19.4.1.3 and 19.7
a) potential for social impacts to occur	
b) location of other relevant projects (existing or proposed)	Section 19.6
c) location and types of physical and social infrastructure, settlements and land-use patterns	Section 19.5 and Section 19.6
d) social values that might be affected by the project including integrity of social conditions, liveability, social harmony and wellbeing, and sense of community	Section 19.7
e) Indigenous social and cultural characteristics, such as native title rights and interests, and cultural heritage	Chapter 18 – Cultural Heritage
Social Baseline Study	

Terms of Reference	Section of the EIS
<p>1.4 Undertake a targeted baseline study of the people residing within the project's SIA study area. This will provide a benchmark against which to identify the project's social issues, potential negative and positive social impacts, and the mitigation/management plans to address these impacts. The social baseline study should be based on quantitative and participatory methods. It should be supplemented by community engagement processes and primary data collection, and should reference relevant data contained in local and state government publications, reports, plans, guidelines and documentation, including regional and community plans.</p>	Section 19.4
Community Engagement	
<p>1.5 The baseline study, assessment of potential social impacts and development of appropriate mitigation measures and management plans should be informed by an inclusive and collaborative community and stakeholder engagement process. The engagement should commence at an early stage of the EIS process, and should include consultation with a broad range of stakeholder groups including affected landholders, local residents, community groups, Traditional Owner/Aboriginal and Torres Strait Islander representatives, state and local government agencies, and non-government organisations.</p>	Noted. Chapter 1 – Introduction. Consultation re finding of the EIS will be undertaken to the local community and outcomes reported in the SEIS stage.
<p>1.6 The community and stakeholder engagement process should be adequately described and documented in the EIS report. This should include details such as stakeholders consulted (including how and when they were consulted), principle and processes adopted, overview of the consultation program and key events, stakeholder feedback and issues raised (including the means by which these have been or will be addressed), and details of any negotiations or agreements required for impact mitigation and management.</p>	Noted. Chapter 1 – Introduction. Consultation re finding of the EIS will be undertaken to the local community and outcomes reported in the SEIS stage.
Potential impacts and mitigation - social	
Impact assessment	
<p>1.7 Assess and describe the type, level and significance of the project's social impacts (both negative and positive), based on the outcomes of the community engagement, social baseline study and impact analysis processes. This should include sufficient data to enable affected local and state authorities to make informed decisions about the project's effects. The potential social impacts will be identified by considering the potential project-induced changes to key aspects included in the social baseline study.</p>	Section 19.6 and Section 19.7 and Appendices 10a, 10b and 10c.
<p>1.8 Impact assessment should include an assessment of the potential scope and significance of impacts at the local and regional level, considering factors such as population and demographic changes, workforce, lifestyle and amenity, community values, housing, local and regional planning outcomes, social infrastructure, and the health and social/cultural wellbeing of families and communities.</p>	Section 19.6 and Section 19.7 and Appendices 10a, 10b and 10c.
<p>1.9 The impact assessment should also evaluate and discuss the potential cumulative social impacts resulting from the proposed project in combination with other existing or projects in advanced planning stages within the SIA study area. Key issues assessed should include:</p> <ul style="list-style-type: none"> a) Population b) Workforce (construction and operation) c) Workforce accommodation d) Local and regional housing markets e) Use of and access to community infrastructure, services and facilities (including social and health services and facilities) f) Any existing legacy issue(s) or cumulative impact(s) which is/are not attributed to the present project proposal or other known projects which are at an advanced stage of planning 	Section 19.6 and Section 19.7 and Appendices 10a, 10b and 10c.

Terms of Reference		Section of the EIS
1.10	The impact assessment should describe: <ul style="list-style-type: none"> a) The impacts identified by the SIA process b) Impacted stakeholders c) Mitigation and management measures, including timing/timeframes d) Defined outcomes, and the performance indicators and targets to achieve the outcomes e) Monitoring and reporting framework f) Residual impacts (after mitigation/management) and how these will be addressed. 	Section 19.6 and Section 19.7 and Appendices 10a, 10b and 10c.
Management plans		
1.11	Management plans for the following are to be provided as part of the SIA: <ul style="list-style-type: none"> a) Community and stakeholder engagement b) Workforce management c) Housing and accommodation d) Local business and industry content e) Health and community wellbeing 	Section 19.8