

20 | Social



Section 20 Social

20.1 Overview of the Project

The proposed Alpha Coal Project (Mine) (the Project) aims to develop a 30 million tonnes per annum (Mtpa) product open cut thermal coal mine to target the coal seams in the Upper Permian coal measures of the Galilee Basin, Queensland, Australia. The coal mine will be supported by privately owned and operated rail and port infrastructure facilities. At the Project site the coal will be mined, washed and conveyed to a train load-out facility where it will be transported approximately 500 Kilometres (km) to the east coast of Australia to the port facility of Abbot Point for export.

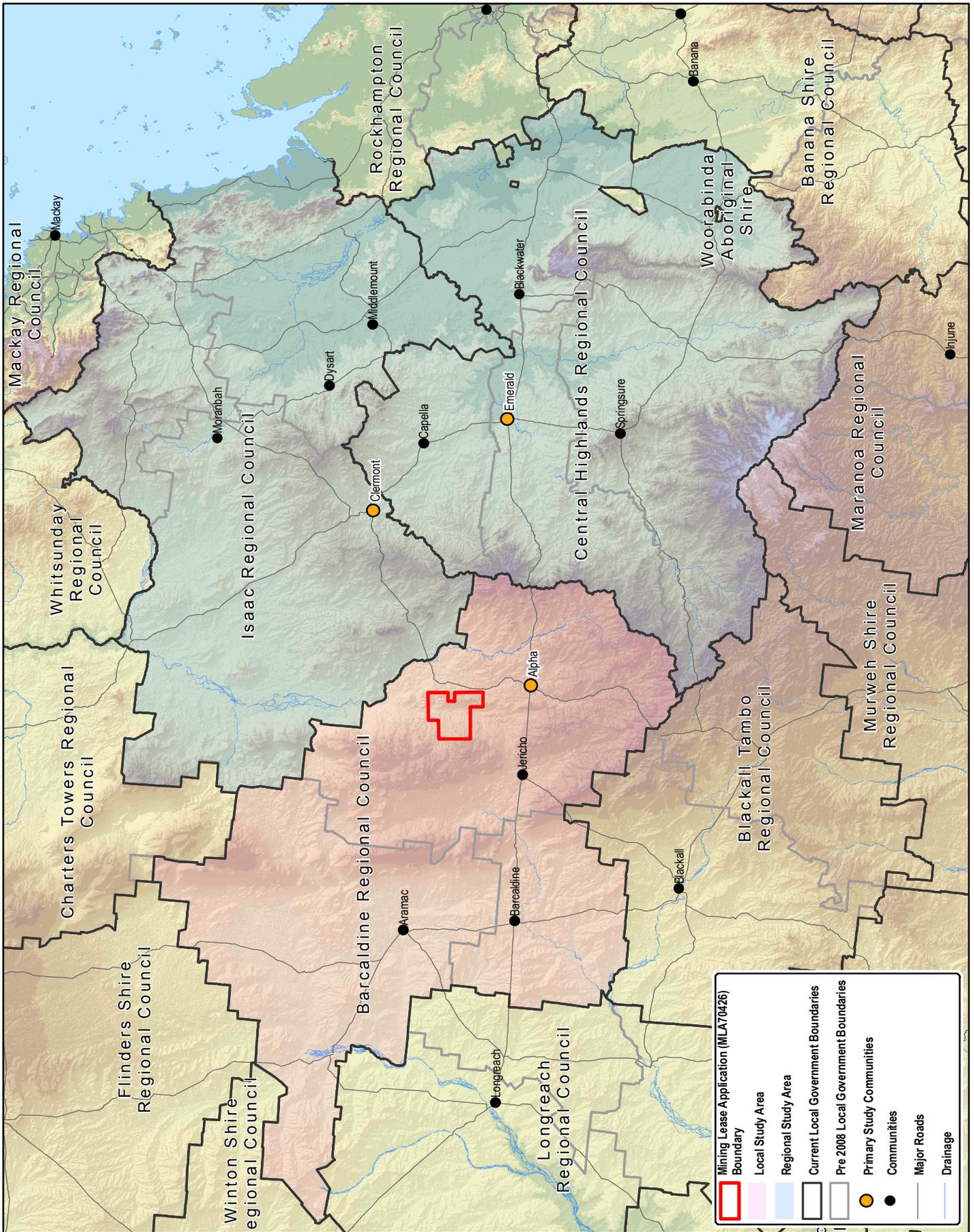
The anticipated mine workforce during the construction phase is ~1,000 people, and ~1,400 including rail workers to be housed in the accommodation village. The Project will have a peak operations workforce of ~2,400 workers (including contractors) for the remaining Life Of Mine (LOM), scheduled across a 30 year span. The Project will also create flow-on (indirect) employment opportunities for the region. These are approximate numbers as the exact numbers are likely to change, but within the anticipated range for the final workforce.

The Project will accommodate the majority of the construction and operational workforce in an on-site accommodation village within the Project boundary. The workforce is anticipated to be predominantly fly in, fly out (FIFO) due to the location and distances to population centres capable of accommodating such a large workforce. The Project will also have drive in, drive out (DIDO) opportunities for some local residents, and bus in, bus out (BIBO) opportunities from key regional centres. FIFO workers will be collected from key regional centres throughout Queensland based on workforce sourcing realities at the time, and flown to Alpha aerodrome for their work rotations. FIFO workers will be bussed to site from the aerodrome and back to the aerodrome after their work rotation. Hancock Prospecting Pty Ltd (HPPL) (the Proponent), prefers to hire locally and regionally but has designed a mainly FIFO project with on-site accommodation in anticipation of the high likelihood workers will need to be sourced outside the region.

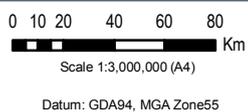
The regional study area includes Isaac Regional Council (closest community to the mine is Clermont), and Central Highlands Regional Council (closest service centre to the mine is Emerald). The local study area includes Barcaldine Regional Council with the closest community to the mine being Alpha (see Figure 20-1). Regional centres include communities like Brisbane, Rockhampton, Mackay, Townsville and Cairns; however, the exact regional centres to be used have not been determined for the Project at this stage. Potential FIFO airports will be identified based on workforce numbers from various regions throughout Queensland, and possibly Australia as a whole.

Potential social impacts during the construction and operational stages of the Project include the following key social areas:

- History and Settlement;
- Demographic;
- Culture and Community Dynamics;
- Housing and Accommodation;
- Health, Wellbeing and Social Infrastructure;
- Education and Training;
- Labour Market and Employment;
- Industry and Business;
- Income and Cost of Living;
- Governance; and
- Primary Industry and Access.



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HANCOCK PROSPECTING PTY LTD

Alpha Coal Project
Environmental Impact Statement

PROJECT LOCATION IN
RELATION TO REGIONAL COUNCILS

Job Number | 4262 6580
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Figure: 20-1

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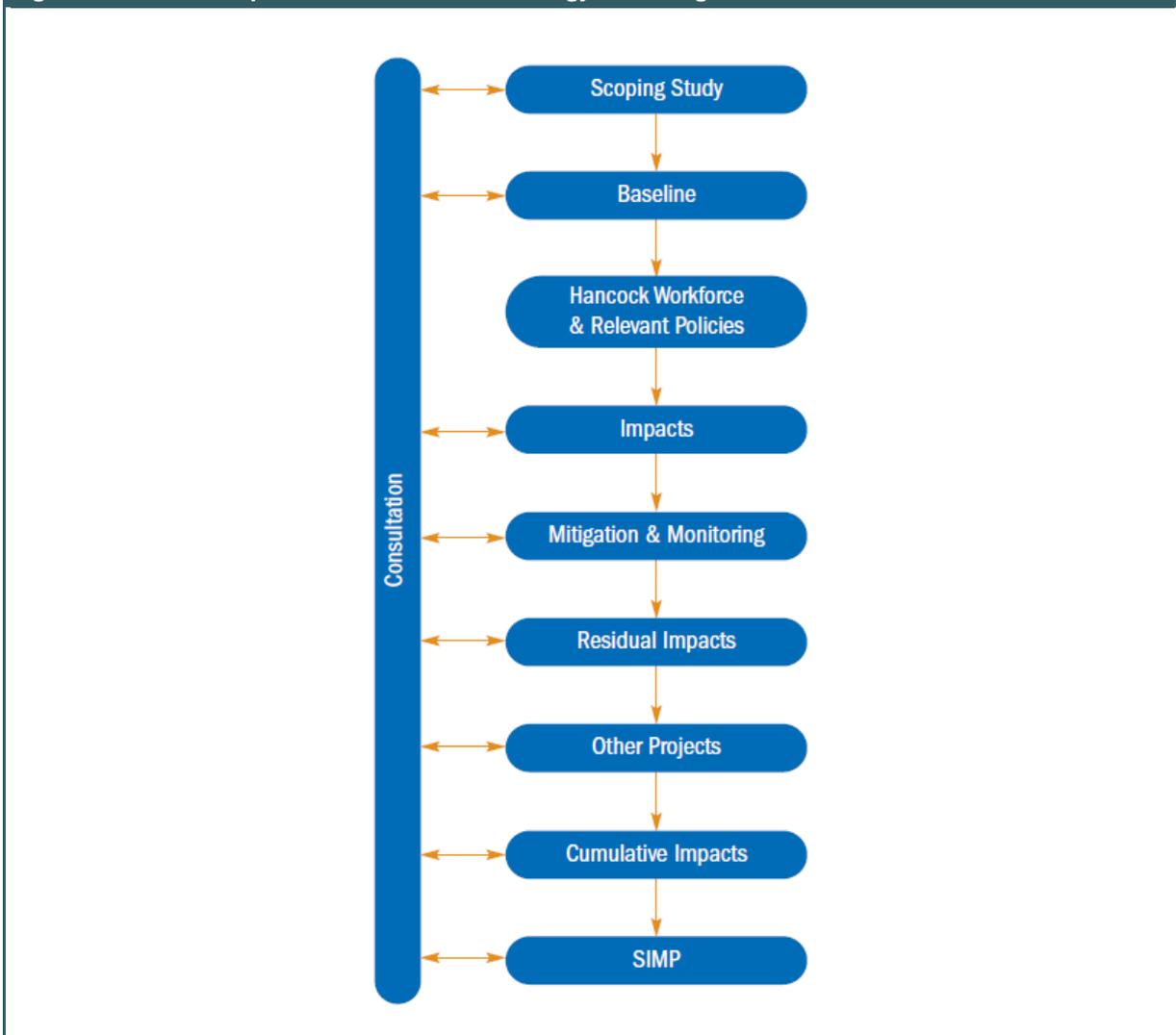
20.2 Introduction

The purpose of the Social Impact Assessment (SIA) is to address Part B, Section 4 of Terms of Reference (TOR), titled “Social values and management of impacts”. The SIA focuses on the mine component of the Alpha Coal Project (the Project). The following provides a summary of the assessment and findings. The complete SIA can be found in Volume 5, Appendix M.

The social section of the Environmental Impact Statement (EIS) is presented as a summary of the key findings from the SIA. This section is written as a report for the public and focuses on each directly impacted community and council individually. The SIA is a technical report and presents data based on the study areas and the valued social components (social categories) examined. The SIA is seen as the primary document for the EIS.

The following methodology was implemented based on a standard approach to impacts assessment. Figure 20-2 illustrates the methodology used for the SIA.

Figure 20-2 Social Impact Assessment Methodology Flow Diagram



This EIS section is arranged in a different manner to the SIA technical report (see Volume 5, Appendix M). The baseline and impacts are presented together to allow the reader to transition from baseline data to impact without having to move between sections. The SIA technical report presents a more thorough assessment of the baseline, case studies, project workforce and other details, and subsequent impacts assessment. It is recommended that this EIS section only be read as a summary, not the full assessment.

20.2.1 Methodology

The SIA has adopted the relevant International Association for Impact Assessment (IAIA) SIA principles, including the precautionary and uncertainty principle when predicting social impacts. The predicted social impact may change as more information about the Project is known (during the detailed design) and the Project is being constructed and operated. Therefore actual social impacts of the Project are not known at the time of writing this section. A monitoring program has been developed based around recognised benchmarks in order to provide information on whether potential social impacts actually occur or not (see Volume 2, Section 27 of the EIS – Social Impact Management Plan [SIMP]).

This section follows the same methodology as the SIA but presents the data in a different way. The section is written as a quasi case study for the communities and councils identified in the SIA. The case studies are separated by study area. Each case study examines the key baseline data, followed by a summary of the impacts. Workforce and key Project details are presented prior to the case studies for context.

For information on the assessment process and outcomes refer to Volume 5, Appendix M. Below is a brief summary of the methodology undertaken for the SIA.

20.2.1.1 Desktop Scoping Study

The purpose of the scoping study was to develop a high level understanding of the proposed study area and to gather information on the people and communities potentially affected by the Project. The objective was to identify what method of social assessment would be implemented and how to best collect data.

20.2.1.2 Baseline Assessment

The purpose of collecting baseline data was to establish a level of understanding of the study areas to meet the requirements outlined in the TOR. The type of information required under the TOR, the level of detail, and ratio between qualitative and quantitative data varies from project to project and community to community. A mixture of historical background, statistical information and local knowledge was collected with a focus primarily on the aspects of the community that could be impacted by the Project. Targeted information was collected to answer specific questions and fill data requirements. This was generally achieved through interviews and questionnaires. Indirect information was also collected to identify aspects of the community not available through statistics and other available information sources. This generally covered the intangible characteristics of the community like community outlook, attitude, and emotions. The purpose was to capture the overall community characteristics to inform the analysis of potential impacts associated with the Project on the social environment.

20.2.1.3 Case Studies

Case studies were developed for similar areas in order to identify analogous situations to the impacts that could potentially occur in the study area. The following case studies were developed and considered in the drafting of the baseline and assessment of potential impacts:

- Insights and Lessons for Alpha from the Example of Mining Development at Nebo;
- Bowen Basin History and Development; and
- Strategic Community Development – A Study of Clermont.

20.2.1.4 Project Workforce Details

The purpose of defining the Project workforce was to develop an understanding of the workforce for various phases of the Project (construction, operation and maintenance, and closure) by identifying key variables relevant to the potential interaction with and impacts on the communities. The workforce numbers are approximations as the exact numbers are likely to change. The values included in this section are within the anticipated range for the final workforce.

20.2.1.5 Impact Assessment

The purpose of the impact assessment is to identify and evaluate the significance of any potential positive and negative impacts the Project could have on the community. The objective is to identify potential real and perceived impacts to the community and assess the magnitude and likelihood of each across spatial and temporal boundaries.

20.2.1.6 Mitigation and Management

The purpose of the mitigation and enhancement strategies presented in this section and the SIA are to develop means of reducing the effects of potential negative impacts while increasing the effects of positive impacts. The objective is to develop the Project with minimal negative impacts and maximum positive impacts whenever possible. Where applicable, linkages to existing local and State government, local service providers and private business programs and strategies were included. Best practices and successful strategies adopted in other projects and regions were included or identified as potential models where possible.

Monitoring and tracking programs have been identified as potential means to observe changes in the communities associated with the Project. Use of State and local government services specialising in the component to be tracked is the preferred option, with input and review by the Proponent.

20.2.1.7 Other Projects

As part of the SIA, proposed projects identified by Department of Infrastructure and Planning (DIP) and the Proponent as likely to occur in the area during the same time frame as the Project were reviewed. The purpose was to develop an understanding of the other projects in order to inform the cumulative effects assessment. Information was requested at the same level of detail as presented for this Project in order to best assess potential impacts.

20.2.1.8 Cumulative Effects

The cumulative effects assessment reviewed the potential effects of the Project construction, operation and maintenance impact when considered with those from other projects identified by DIP and the Proponent. Assumptions were required in order to conduct the assessment. The purpose of the cumulative effects assessment was to identify areas of concern, areas of opportunity, and areas

where cooperation could reduce potential negative impacts and enhance potential positive impacts arising from multiple projects.

20.2.1.9 Social Impact Management Plan

A draft social impact management plan (SIMP) was identified in the TOR as a requirement for the SIA. The SIMP is modelled on the DIP SIA Unit Draft SIMP Guidelines and discussions with the SIA Unit. Modifications have been made to the SIMP format to better align with the SIA. The DIP SIA Unit has been consulted regarding the SIMP layout and contents, as well as the rationale behind developing two independent SIMPs for the mine and rail components of the Project.

The objective of the SIMP is to provide an effective management tool for Project impacts. Timing is an important factor to consider since the Project details can change. The SIMP is required to be adaptive, and re-examined for validity (frequency to be determined during Stage 2) and re-examined periodically throughout the life of the Project.

The SIMP is intended to support ongoing management of the potential social impacts of the Project. In recognition of the changing nature of impacts over the life of the Project, the SIMP will be adaptive and reassessed at regular intervals. Benchmarks will be established and monitored continuously throughout implementation and the management plan adapted as required. A wholesale review of the SIMP will be undertaken following each release of new census data and monitored using annual census updates to proactively identify any sudden or unexpected changes in the environment or impacts.

The SIMP is developed as a three stage approach:

- **Stage 1:** Develop the draft SIMP based on the SIA analysis and conclusions;
- **Stage 2:** Consult key stakeholders on the details of the SIMP, roles and responsibilities, benchmarks, reporting, monitoring and program evaluation; and
- **Stage 3:** SIMP implementation.

The Project EIS includes a draft SIMP (refer to Volume 2, Section 27) at the Stage 1 level. Stage 2 is the critical stage of the SIMP. Initial discussions regarding the process to complete Stage 2 will be discussed after EIS lodgement with the State government; however, thorough discussions on the details will be undertaken when the Project has received approval from the State. The rationale being that this process will be very labour intensive by all parties involved, particularly as the finer details of construction and operation are yet to be confirmed. There is real risk of stakeholder fatigue and disillusionment if the Stage 2 process is conducted and the Project does not proceed. There are several months between EIS approval and construction commencement when Stage 2 can be developed in consultation with councils and other key stakeholders.

Stage 3 will occur within an agreed time prior to the commencement of construction, and preferably more than one month prior.

20.2.1.10 SIA Consultation

The Alpha Coal Project (Mine) SIA consultation was performed in line with the International Association for Public Participation (IAP2) Spectrum for Public Participation and concepts and designs within their certification course.

The SIA consultation was largely conducted in concert with general EIS consultation. This strategy was used to limit the number of consultation events in order to produce a more efficient program and reduce the potential for stakeholder fatigue. The SIA team and EIS consultation team shared the same members, which assisted in categorisation, interpretation, and analysis of data. This sharing of members was a further reason to conduct the EIS and SIA consultation together in order to reduce stakeholder confusion. Stakeholders were informed if the conversation was strictly for the SIA, as was the case in the final council meetings in August 2010. For further information on the Alpha Coal Project (Mine) EIS consultation process refer to Volume 5, Appendix O.

The following means of stakeholder engagement were undertaken in order to inform the SIA:

- Community information sessions;
- Regional Council meetings;
- Regional shows;
- Targeted consultation; and
- Questionnaires.

There was also a 1300 free-call number, project website and individual business cards with contact information available to stakeholders.

20.2.2 Study Areas

Two separate study areas were identified for assessment (refer to Figure 20-1 above):

- Regional Study Area:
 - Isaac Regional Council (IRC):
 - Primary focus on Clermont; and
 - Secondary focus on the rest of council.
 - Central Highlands Regional Council (CHRC):
 - Primary focus on Emerald; and
 - Secondary focus on the rest of council.
- Local Study Area:
 - Barcaldine Regional Council (BRC):
 - Primary focus on:
 - Alpha (State Suburb) and the mining lease area;
 - Directly affected homesteads/stations and properties; and
 - Indirectly affected homesteads/stations and/or properties.
 - Secondary focus on the rest of council.

20.3 Workforce Profile

The workforce profile provides a brief description of the key workforce details relevant to the Project SIA. Information was collected on anticipated workers based on the Proponent experience and recent similar projects in Queensland. The data is based on a probable scenario and may be different when actual contracts are negotiated.

20.3.1.1 Construction

The anticipated workforce during construction phase is approximately 1,000 people (approximately 1,400 including railway workers based at the mine accommodation village). Using the assumptions applied to the FIFO logistical study, the overall construction workforce will be broken into three construction workforces averaging 850 throughout the construction phase of the project. The construction split will be based around activities and work. The split will be Group A (all other construction including Mining Infrastructure Area (MIA) and Mine Enabling Infrastructure scope), Group B (the Coal Handling and Preparation Plant (CHPP) workforce), and Group C (Rail workforce). These are approximate numbers as the exact numbers are likely to change, but within the anticipated range for the final workforce.

While the Proponent would like to recruit locally the reality is that limited numbers of personnel will be sourced from the local area because of the low population levels. Therefore it is assumed that the majority of the construction workforce will originate from or at least depart for the mine site from South East Queensland (Brisbane). Previous experience of new mine developments suggest that a percentage will originate from Central and North Queensland regional centres such as Mackay, Rockhampton, and Townsville. Table 20-1 provides the assumptions used in the SIA regarding the sourcing and transportation of construction personnel.

Table 20-1 Percentage of Workforce Fly In Fly Out (FIFO) / Drive In Drive Out (DIDO) and assumed sources

Construction	Mode	Group A Mine and Mining Infrastructure Area	Group B Coal Handling and Preparation Plant	Group C Rail
Alpha Township	DIDO/BIBO	1%	-	-
Bowen	DIDO/BIBO	-	-	2%
Local BRC area	DIDO/BIBO	9%	5%	
Whitsundays	DIDO/BIBO	-	-	3%
Regional, Clermont, Emerald	DIDO/BIBO	15%	10%	
Mackay, Townsville	DIDO/BIBO	-	-	15%
Rest of Queensland, Australia	FIFO	75%	85%	80%

Source: HPPL

It is expected that the workers will be predominately in the 20 - 35 age group and the majority will be male. Given their age profile, it is likely that a large proportion of these employees will be either single with no dependents, or have young families.

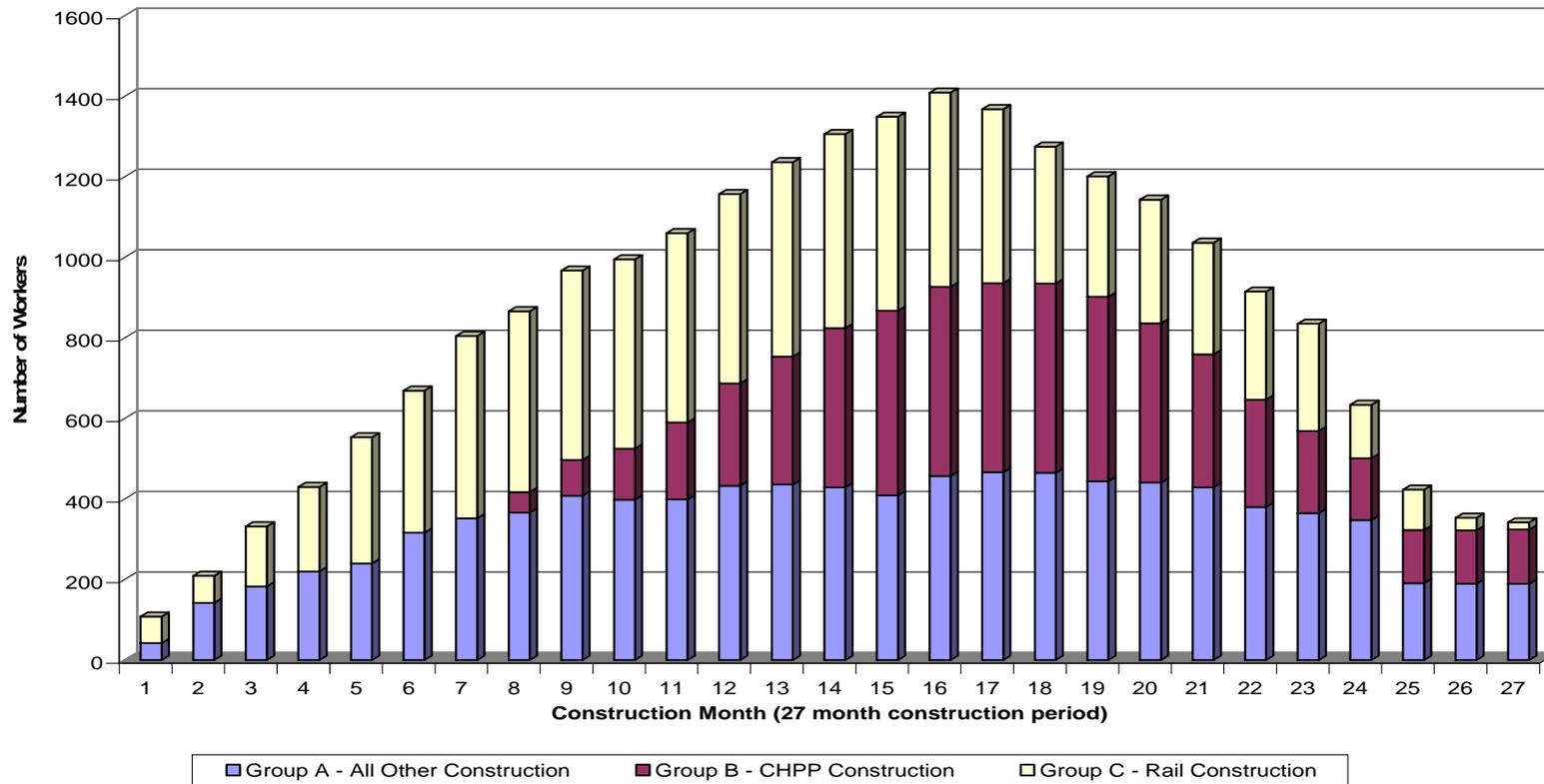
The construction workforce will be accommodated in a mine-standard construction accommodation village. The accommodation village will be large enough to accommodate all workers, allowing for both shifts of each group to be on site for an overlap period of three days. All personnel will be required to stay at the accommodation village site for the entire duration of a roster unless otherwise agreed with site management.

The rail workforce will be accommodated at one of five accommodation villages located along the rail line or at the mine site, depending on which section of the railway they are working on at any given time.

Given the distance of the Project site from port and transport centres such as Mackay, Townsville and Rockhampton, it is likely that driving to the site and unloading equipment from the truck will fill the majority of an allowed shift (e.g. 12 -14 hours). As such, additional accommodation will be available in the on-site accommodation village sufficient for anticipated numbers of transport personnel.

The estimated total number of construction personnel at the peak of the construction programme is 1,409 in construction month 16 of a 27 month program. Figure 20-3 illustrates the construction workforce numbers over the anticipated 27 month program.

Figure 20-3 Alpha Coal Project Construction Workforce Numbers, 27 Month Construction Period



Source: HPPL

The majority of personnel are expected to be transferred by air to the Project site on a FIFO arrangement.

In an effort to reduce the amount of project related traffic using roads around the area, bus services will be provided from a number of regional centres to transfer workers to site. The bus collection locations and routes will be dependent on the actual workforce composition but are likely to cover Mackay, Townsville, Rockhampton, Emerald, Clermont and Barcaldine, potentially stopping in other towns to collect workers as required. Once at the Project site, personnel will be restricted from leaving the mining lease area. The bus service will transport personnel back to their home towns upon completion of their shift rotation.

Some construction personnel recruited from the local study area, the regional study area, and Central/North Queensland will drive to site, arriving at the accommodation village the day prior to their shift commencing. Workers wishing to drive to site will need specific approval from the Project site management. This will be assessed on a case-by-case basis. All workers who drive to work will still be restricted from leaving the Project site without prior approval during a shift rotation.

Based on industry practice and consultation with the Project team, the assumed roster will be one 12 hour shift per day, over a possible 21 days on and 7 days off (21/7) rotation for all construction workers except for those working on the rail. See Volume 3, Section 2 and Section 20 for information on the rail workforce.

The average annual labour costs and numbers for the staff are summarised in Table 20-2.

Table 20-2 Annualised Labour Costs

Category	Amount Each	No. at Full Production	Coverage
Staff Level 1	\$360,000	2	Senior site executive, operations manager
Staff Level 2	\$250,000	7	Manager
Staff Level 3	\$185,000	14	Superintendent, senior professional
Staff Level 4	\$155,000	43	Shift supervisor
Staff Level 5	\$150,000	12	Supervisor, production professional
Staff Level 6	\$145,000	3	Surveyor, planner
Staff Level 7	\$140,000	30	Other professional
Staff Level 8	\$110,000	11	Graduate, Senior technician
Staff Level 9	\$85,000	62	General administration staff, technician, clerk
Staff Level 10	\$65,000	2	Trainee, switchboard operator
Total		186	

Source: HPPL, 2009. Alpha Coal Project Pre-Feasibility Study. Commercial In Confidence. March, 2009

Individual annual costs for the award labour are summarised in Table 20-3.

Table 20-3 Award Labour Annual Costs

Category	Amount Each	Description	Application
Shift Operator	\$154,344	12 hour continuous roster	Blast crew, trades pit services crew
	\$161,620	12.5 hour continuous roster	Production equipment operators
Maintenance	\$154,344	12 hour continuous roster	General fleet maintenance

Source: HPPL, 2009. Alpha Coal Project Pre-Feasibility Study. Commercial In Confidence. March, 2009

The award labour costs have been applied to the individual items of equipment on an hourly basis.

20.3.1.2 Operation

The Project will have a peak workforce of approximately 2,400 workers. Figure 20-4 illustrates the workforce numbers required for the Project based on a 30 year mine life. The ramp up process takes approximately three years though the majority of the workforce is undertaking capital projects. By year seven capital projects have dropped to their operation norm. By year five in-pit operations are fully active. These are approximate numbers as the exact numbers are likely to change, but within the anticipated range for the final workforce.

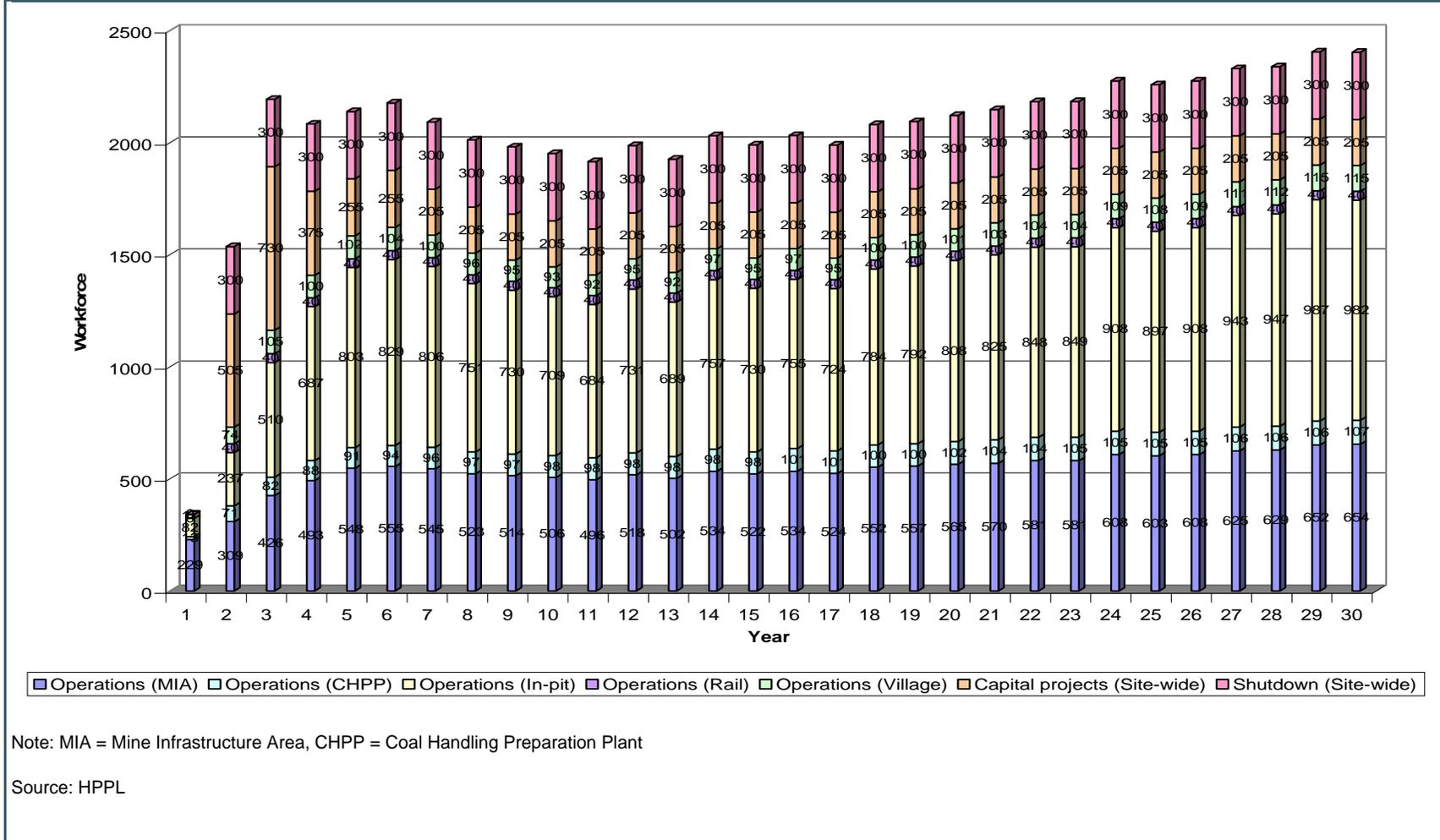
There is currently limited relevant experience within the local study area, with only 0.7% of all employed people employed in the mining sector. This, combined with a low population base makes it impossible to source the workforce from the local study area. Despite the vast coal mining experience in the regional study area, the small population and high employment will impact on the ability of the Proponent to attract suitably qualified workers from within the regional area. Because of this, it is expected that the majority of the Project's operational personnel will be recruited from outside the area, including South East Queensland and the rest of Australia.

Basing assumptions on the experience of other mines in the region and across Australia, it can be assumed that the profile of the workforce will be predominately from the 25 – 35 year old age groupings with a male majority (although the adoption of proactive recruitment policies and a commitment to training can make this even more) as in the case of Clermont Coal Mine Project (CCMP). Given their age-grouping it is probable that a large number will have young families, while others will be single. The home community of the operational personnel will vary from small and medium sized rural and mining communities located in central and north Queensland, agricultural communities located in the western part of BRC and larger urban centres such as Mackay, Townsville, Brisbane, and beyond.

The final transport and logistical arrangements for the operational workforce will be based on the home community of the workforce and confirmed during mine start up through a consultation program.

There will be a policy on daily hours worked, and a policy on travel time to be developed prior to commencement of operations. As a result, only people who live within a 100 km radius of the mine site will be able to drive to and from work on a daily basis – i.e. in Alpha, Jericho or Anakie. This policy will be finalised prior to the commencement of operations in consultation with BRC.

Figure 20-4 Alpha Coal Project Operation Workforce Numbers, 30 Year Mine Life



Note: MIA = Mine Infrastructure Area, CHPP = Coal Handling Preparation Plant

Source: HPPL

Personnel recruited from within the regional study area – particularly Emerald or Clermont, but also other towns, will likely use BIBO to be transported to the site for their work rosters. The BIBO service is anticipated to collect personnel from designated pick-up points in selected towns and regional centres according to an established timetable and transport them to the on-site accommodation village. In some circumstances, employees from the regional study area may wish to drive their own cars to work prior to commencing a roster. Such cases will be limited and will require prior approval from site management.

The majority of the workforce will be transported by FIFO from Brisbane and potentially other regional centres such as Mackay, Rockhampton and Townsville. FIFO transfers will operate on certain days which will be determined based on aircraft/service availability and requirements of other FIFO operations in the region.

There is also the potential to use light aircraft to transport personnel from smaller regional towns such as Clermont. Options for this will be explored further as the workforce employment is commenced.

As with other mines the scheduling and determination of rosters and rotations will be based on the requirements of the position. For example some positions may require personnel to work nine-days on, five days off (9/5) roster, while others may be more flexible and a 14 days on, seven days off (14/7) or a seven days on, four days off (7/4) roster adopted.

Exact shifts/roster rotations will be determined by consultation at the start up of the mine.

Operational personnel will be accommodated in an on-site accommodation village which will be located on the south-eastern portion of the mine lease where the disturbance to off-duty employees from noise, vibration and light will be minimal. The accommodation village will be designed and constructed to fit in with the environment and will include comfortable, en-suited accommodation, catering facilities and appropriate recreational facilities.

The operation salary is captured with the construction salary in Section 20.3.1.1.

20.4 Regional Study Area

This overview of the regional study area presents key baseline data, potential impacts and mitigation per regional council and key community. The SIA technical report in Volume 5, Appendix M presents the data in a more traditional format where baseline, impacts and mitigation are separated into different sections. This section examines the communities and councils as a whole. The regional study area as described in section 20.2.2 above includes and assessment of the Isaac Regional Council (IRC) focusing on Clermont and the Central Highlands Regional Council (CHRC) focusing on Emerald.

20.4.1 Clermont and Isaac Regional Council

20.4.1.1 History and Settlement

20.4.1.1.1 Baseline

Isaac Regional Council (IRC) came into existence in March 2008 as a result of the amalgamation of the Belyando, Broadsound and Nebo shires following the Local Government Reform Commission report released in July 2007. All three shires had traditional links to grazing, agriculture and mining (Isaac Regional Shire, 2010). Plate 20-1 shows what a typical rural residential property looks like in the south-western portion of IRC near the Clermont area.

Plate 20-1 Typical Rural Residential Property



Source: HPPL

Located in central Queensland, the IRC covers an area of 58,862.0 km² representing 3.4% of the total area of the state (OESR, 2 July 2010). IRC stretches from “Coal to Coast” in central Queensland and includes the townships of Clermont, Dysart, Glenden, Middlemount, Moranbah, Nebo, Coppabella, St Lawrence, Camila, Clairview, Greenhill and Ilbilbie.

The Bowen Basin which contains significant mining reserves and associated mining communities, covers an area of approximately 60,000 km² of central Queensland, from Collinsville in the north to Theodore in the south and has the largest coal reserves in Australia. The Bowen Basin provides approximately 83% of Queensland’s total coal production, the state’s most important export commodity. Much of the Bowen Basin lies within IRC boundaries. While many of the currently operating mines have only opened in the last decade, the Bowen Basin has been a major force in mining for well over a century (Mining Communities Research Exchange, 2010).

The area was first settled by pastoralists in the 1860s, however shortly after, the discovery of copper and particularly gold, brought droves of prospectors to the area. The recent history of the area is one of highly successful mining operations, with some 49 coal mines and 25 mineral mines currently operating in the IRC area. The IRC reported that mining accounted for 76.1% of the council’s Gross Regional Product (GRP) in 2007 – 2008 (Regional Economic Development Forum February 2009).

Although Clermont was first explored by Ludwig Leichardt in 1845, it was William and Charles Archer (from the family who established the port of Rockhampton) who recognised the area’s grazing potential and in 1856-57 returned to claim large tracks of land. In 1861 a group of shepherds found gold by the side of Hoods Lagoon and prospectors were lured to the area and Clermont established, forming the first inland settlement north of the Tropic of Capricorn.

The name Clermont, gazetted in 1864, comes from Clermont-Ferrand in France, the home of Oscar de Satgé, who owned Wolfgang Downs (a nearby station) at the time (SMH, 2008). Soon after settlement, copper was discovered and during the 1880s up to 4,000 Chinese lived in Clermont mining for gold and copper. Like many similar communities at this time, Clermont experienced some nasty race riots. Culminating in 1888 when Chinese prospectors were removed from the region (SMH, 2004). The regional railway line was extended north to Clermont from Emerald in 1884; however no passenger trains run on this route. Today Clermont serves as a hub for the surrounding coal mines and agricultural holdings.

20.4.1.1.2 Impacts and Mitigation

The Project is not anticipated to change the perception of IRC or Clermont as both are already viewed as areas with a mix of agriculture and mining. The Project is also outside the region though it is potentially accessible via the Alpha-Clermont Road (also referred to as the Clermont-Alpha Road); however this road would require upgrading to be Project compliant in terms of health and safety concerns. The Project has the potential to have a positive impact on the history and settlement by maintaining the *status quo* through increased opportunities without directly impacting land within the regional council, though this is anticipated to be low.

Clermont is a community that could potentially experience population expansion if access to the Project site is improved (see Section 20.4.1.2 and Section 20.4.1.11). Since an upgrade of the Alpha-Clermont Road is not anticipated as part of the Project, this possibility has not been explored further. The SIMP and Hancock Consultative Committee (HCC) will include participation for IRC in order to effectively monitor external changes (like road upgrades) that are indirectly related to the Project, as well as direct Project impacts.

20.4.1.2 Demographic

20.4.1.2.1 Baseline

The following key points about the demographic of IRC were identified (ABS, 2010):

- As at 30 June 2009 the estimated population of the IRC Area was 22,417;
- At the time of the 2006 Census, 419 people or 2.1% of the population in IRC stated they were of Aboriginal or Torres Strait Islander origin;
- As at 30 June 2008, 71.1% of the population in IRC were working aged (i.e. 15 – 64); and
- At the time of the 2006 Census, 55.8% of families in IRC were couples with children, while only 8.0% were single-parent families; and
- At the time of the 2006 Census, the population of IRC was expected to grow at an average rate of 2.2% per annum between 2006 and 2026.

20.4.1.2.2 Impacts and Mitigation

The Project in its current form is more likely to have positive impacts associated with population growth than negative impacts on the regional demographic. As discussed in Section 20.4.1.1.2, there is currently restricted access to the Project site, which is a limiting factor in people relocating to Clermont for employment opportunities with the Project. The Clermont population is already well established and fairly stable, and currently there is housing available to support minor population growth. Significant population growth (>5.0% - Burdge, 2004) would be measured at ~125 residents for Clermont. This is not anticipated to occur; however, Stage 2 SIMP consultation will identify means for tracking population changes, recognition of sources (the Project, other projects, increased access or cumulative), mitigation options and responsible authorities. It is important to note that manageable population growth is a stated objective of IRC for the Clermont area. The SIMP will also consider defining manageable growth for each region in consultation with the local government..

20.4.1.3 Culture and Community Dynamics

20.4.1.3.1 Baseline

The following key points on the culture and community dynamics of IRC were identified (OESR, 2010) at the time of the 2006 Census:

- Of those aged 15 and over, 22.6% in IRC were volunteers within the regional; and
- 50.5% of people in IRC were living (usually residing) at a different address five years earlier;
- 7.4% of people in IRC stated that they were born overseas; and
- 5.1% of people in IRC were in the most disadvantaged and 17.3% were in the least disadvantaged quintile.

Clermont is a well integrated community mainly comprising agriculture and mining. There is a well established relationship with Rio Tinto (the owner of both the Blair Athol and Clermont mines) and the community, and mining is a part of the social fabric. The relationship with mining in general is also well established throughout the council, though the relationship is more positive in the Clermont area.

20.4.1.3.2 Impacts and Mitigation

The impacts of the Project on culture and community dynamics are again maintenance of the *status quo*. This is assessed as a low positive impact due to the well established mining component of the community. As discussed previously, the SIMP will include a means for monitoring change in the community associated with culture and community dynamics. Issues in smaller population centres similar to Clermont have occurred elsewhere when multiple mining companies employ residents. Council could prove an important liaison between multiple projects to manage this, and will be consulted regularly in order to maintain a positive and proactive relationship.

20.4.1.4 Housing and Accommodation

20.4.1.4.1 Baseline

The following key points on the housing and accommodation of the regional (IRC and Clermont) study were identified (OESR, 2010, ABS, 2006):

- In the 12 months ending 31 March 2010, there were 95 dwelling units in new residential buildings approved in IRC, representing a total of \$28.463 million; and
- At the time of the 2006 Census there were 1,300 private dwellings in Clermont (state suburb) of which, 1,054 were occupied. Of those occupied 60.8% were occupied by families, while 24.3% were single-person households.

Consultation with IRC indicated there is housing currently available in the community, as well as additional potential housing from Rio Tinto supplies. Council indicated there is difficulty in the process of State release of land for development, which could be a limiting factor in the future.

20.4.1.4.2 Impacts and Mitigation

The Project is not anticipated to significantly increase the population in Clermont in its current form, and is therefore assessed as a potential low impact on housing and accommodation. This could change with improved access to the Project site; however that was not assessed as part of the current project description. The SIMP will consider options for tracking housing stock in the community and

reasons for changes. The Proponent will also consider working with councils to help expedite the process of land release from the State government for development.

There is a potential for market speculation to increase housing prices, but this is assessed as a low likelihood due to anticipated population changes (see Section 20.4.1.2.2). Hancock has an ~1,500 acre plot of land near Alpha and will explore opportunities with BRC for future beneficial use. This may assist in housing and accommodation issues for the community, and/or a potential commercial/industrial area. The exact use(s) will be determined in consultation with BRC.

20.4.1.5 Health, Wellbeing and Social Infrastructure

20.4.1.5.1 Baseline

The following key points about health and wellbeing in the regional (IRC and Clermont) study were identified:

- There is an emergency hospital offering various services in Clermont;
- There is a permanent Queensland Ambulance Service (QAS) stationed at Clermont (pers. comm., 2010);
- At the time of the 2006 Census, 1.3% of persons in IRC were in need of assistance with a profound or severe disability (OESR, 2010); and
- The average annual increase in births in IRC was 7% between 2001 and 2007 (OESR 2008).

There are also health and wellbeing services through the regional council and State government available. Clermont has several community organisations and networks including:

- Clermont Community Housing and Other Services;
- Isolation Parent's Support Centre;
- Clermont Country Women's Association; and
- Returned Service League (RSL).

20.4.1.5.2 Impacts and Mitigation

The Project could result in an increased drug and alcohol abuse, gambling (high disposable income and free time on days off) and violence including domestic violence. This impact is assessed as low due to low anticipated levels of population increase (see Section 20.4.1.2.2) and low unemployment in the area (see Section 20.4.1.7.1) due to other employment opportunities. These are common vices attributed to mining communities though research indicates they are generally perceptions rather than reality. There was no research or literature identified that suggested such incidences occurred at a higher rate in mining families than the general population. Regardless, the SIMP will identify existing programs in other parts of IRC and explore the opportunities to expand these services to the Clermont area.

The Project also has the potential to result in increased wages for some, coupled with increased disposable income. This can result in negative impacts (discussed above) and positive impacts. The positive impacts can affect the individual/family of the Project personnel as well as regional businesses that experience increased sales. There is also research indicating a link between financial security and decreased rates of stress and other mental illnesses. In order to maintain positive effects from increase disposable income, the Proponent will explore options like financial planning services and counselling for employees. Opportunities to use existing services within the region will be explored as part of Stage 2 of the SIMP.

20.4.1.6 Education and Training

20.4.1.6.1 Baseline

The following key points on the education and training opportunities of the regional (IRC and Clermont) study area were identified (OESR, 2010):

- In the 12 months ending 31 December 2008, 96.5% of students attending school in IRC attended a government school and 3.5% attended a non-government school; and
- At this time of the 2006 Census 49.7% of persons aged 15 and over in IRC had post-school qualifications.

The Clermont Kindergarten and Day Care Centre has recently been expanded and extra spaces are currently available. This is the only childcare facility currently available in Clermont (pers. comm., May 2010). However, there is always difficulty in finding spots and appropriate times in child care services for communities in Queensland, particularly for shift workers and their families. Limited services also mean residents have fewer options, and often only one or none.

Clermont has schooling available from Reception to Year 12, and there is also a Central Queensland Institute of TAFE.

20.4.1.6.2 Impacts and Mitigation

The Project is not anticipated to negatively impact on local education and training. There are opportunities for shared training in the community though it is difficult to determine if these opportunities would materialise. This could include use of the TAFE or council offices for joint programs to enhance Project and community skills capacity. This is assessed as a low positive. Population increases may result in schools reaching critical mass and acquiring additional resources. Population increase is assessed as a low probability as discussed in Section 20.4.1.2.2.

20.4.1.7 Labour Market and Employment

20.4.1.7.1 Baseline

The following key points on the labour market and employment opportunities of the regional (IRC and Clermont) study area were identified (OESR, 2010):

- The smoothed unemployment rate for IRC as at March quarter 2010 was 1.4%; and
- At the time of the 2006 Census, Mining was the largest industry of employment of usual populations in IRC (38.9% of employed labour force).

Clermont unemployment figures were 3.1% for the 2006 census; however, consultation found this number to be closer to 2.0% in 2010. At the time of the 2006 census (most recent available statistics) 19.0% of those employed in Clermont, were employed in the coal mining sector. This is significantly more than the next highest industry, Sheep, Beef, Cattle and Grain industry which accounts for around 9.6% of employment. Other industries providing significant employment are school education (6.1%), supermarket and grocery stores (4.1%) and local government administration (3.5%). These figures show that there is a high level of local mining capacity and skill in Clermont and indicates that unless alternative employment industries are developed, there could be an increase in unemployment when Clermont mine closes in the projected 16 years.

20.4.1.7.2 Impacts and Mitigation

There is a potential for workers from one industry to transfer to mining as a result of the Project but this is assessed as low, since there is already mining employment opportunities in Clermont and the regional council as a whole. For an area like Clermont this is more likely to be a perception more than a reality, but it could occur and impact other industries. Councils tend to be particularly concerned about losing staff to mines, especially community liaison type roles within council.

The continuity of mine employment opportunities in the region is a significant positive impact, particularly since the Project is anticipated to outlive the current mining operations in the Clermont area. This is coupled with increased employment opportunities which are assessed as a medium positive impact. A potential spin off effect from the increases in opportunities is population growth, which in this case would be a cumulative effect of several mine employment options. As discussed previously, restricted access to the Project site is a limiting factor in population growth directly associated with the Project (see Section 20.4.1.2.2 and Section 20.4.2.11).

20.4.1.8 Industry and Business

20.4.1.8.1 Baseline

The following key points on industry and business in the regional (IRC and Clermont) study area were identified (OESR, 2010):

- The total value of agricultural production in IRC in 2005-06 was \$232.8 million, 2.7% of the total value of agricultural production in Queensland; and
- In 2006–07, there were 1,635 businesses in IRC, 0.4% of all Queensland businesses.

The IRC economy is heavily reliant on mining with the industry accounting for 76.1% of the region's GRP in 2007/08 representing a value of approximately \$5.7 billion. With a number of new mining prospects and extensive exploration and expansion being undertaken throughout the Bowen Basin, this amount is expected to grow (pers. comm., Cedric Marshall, Feb 2010).

20.4.1.8.2 Impacts and Mitigation

The Project could result in an increase in service clients for area businesses. This includes businesses servicing the Project, and businesses offering services to Project employees. This is seen as a low positive impact due to population and access limitations discussed previously (see Section 20.4.1.2.2 and Section 20.4.2.11 respectively).

20.4.1.9 Income and Cost of Living

20.4.1.9.1 Baseline

The following key points on the income and cost of living of the regional (IRC and Clermont) study were identified (OESR, 2010):

- At the time of the 2006 Census, there were 4,324 persons aged 15 years and over in IRC who stated their gross individual weekly income was less than \$400 (29.4% of all persons aged 15 and over) and there were 2,014 persons who stated their gross individual weekly income was greater than \$2,000 (13.7% of all persons aged 15 and over).
- At the last census (2006), the median individual weekly income in Clermont was \$490 and the median family income was \$1,391. The median household income was \$1,091. This put Clermont

at a higher average earning level than the rest of Queensland, and was largely attributable to mining. Median rental prices in the Clermont area were approximately \$150-\$430 in August 2010 (RealEstate.com.au, August 2010).

20.4.1.9.2 Impacts and Mitigation

The Project has the potential to increase housing and accommodation prices in the area, though this is more likely to result from market speculation. There could also be a slight increase in the cost of living associated with increased mine employment (vendors increase prices) but this was assessed as a low negative because it has not already occurred and there is plenty of mine employment opportunity in the Clermont area.

There is also a potential for positive impacts associated with the high wages from mine employment. This was assessed as a high positive; however, the potential number of people to experience this is not included in the assessed impact ranking. For context it is important to note that the number of people anticipated to receive higher incomes from the Project is likely to be low, given the other mine employment opportunities currently available in the Clermont area and region as a whole.

20.4.1.10 Governance

20.4.1.10.1 Baseline

The following key-points on the governance, culture and community dynamics of the regional (IRC and Clermont) study area were identified (OESR, 2010a, b).

- The IRC covers an area of 58,862 km² (3.4% of Queensland's total area); and
- The IRC is made up of a Mayor and eight Councillors (IRC 2010).

IRC is responsible for establishing the vision, mission, values and the strategic direction for the area. The Council's vision is 'to be the region of first choice', the mission is 'to promote and enhance the diversity of lifestyles and opportunity' (IRC 2010).

The Council is still adjusting to the amalgamation process into the regional council from March 2008. This is a common experience across Queensland, particularly amalgamations of multiple former shires over vast areas. As a result there is not a full integration of programs and services in the Clermont area from other areas of IRC.

20.4.1.10.2 Impacts and Mitigation

There is a potential impact to the community if the Project fails to effectively engage in regional planning processes. This was assessed as negative medium impact. The outcome would be that the regional planning process, which has recently commenced, would not adequately consider potential social impacts on the community as a result of the Project. This would mean that the Whitsunday, Hinterland and Mackay (WHAM) Statutory Plan would not include scope to address these potential impacts, and as such, State and Federal funding and development would be harder to obtain. Conversely, effective engagement in these processes will enable potential impacts to be identified and strategies developed to manage these impacts, for example, the plan may acknowledge the increasing significance of the Alpha-Clermont Road and prioritise the required upgrade for funding.

A further potential impact was considered to be the potential for the Proponent to not effectively engage local council in its community committee or to link in with regional community development programs and activities. IRC has developed proactive and positive relationships with mining

proponents active throughout the region, as a result of these relationships, community development activities have been more targeted and designed to ensure they best address community needs and desires. This potential impact has been assessed as a medium negative.

20.4.1.11 Primary Infrastructure and Access

20.4.1.11.1 Baseline

The following key-points on the primary infrastructure and access features of the regional (IRC and Clermont) study area were identified:

- At the time of the 2006 Census, 70.4% of occupied private houses in IRC reported having an internet connection (OESR, 2010);
- The Peak Downs and Gregory Highways connect Clermont to the rest of IRC and CHRC respectively;
- Clermont is connected to Alpha via the Alpha-Clermont Road;
- Emerald is the cross-road for the Capricorn Highway (east-west) and the Gregory Highway (north); and
- The IRC operates airstrips at Clermont, Dysart and Moranbah (Airports Australia 2010).

Clermont is fully serviced with basic infrastructure including roads, electricity, water and sewerage.

20.4.1.11.2 Impacts and Mitigation

The state of the Alpha-Clermont Road is a significant limiting factor for Clermont experiencing more social impacts associated with the Project. The road is not of a standard suitable for Project transportation of both workers and materials. The road is gravel for large tracts, particularly between the Project site and Clermont, and is single lane for most of the length. It is also prone to flooding and adverse driving conditions during and immediately after rain events. An upgrade of this road is not part of the Project description due to the access available along the Capricorn Highway and then the Alpha-Clermont Road via Alpha. Current Project design does not envisage use of this road but this may change over time. The SIMP will consider including an indicator to monitor use of the Alpha-Clermont Road from the site to Clermont.

There are additional options available which the Proponent may consider. Council has identified the potential for a short haul flight from Clermont to Emerald to enable more workers from Clermont to work at the Project, and drastically reduce travel time. This would likely require a private enterprise charter flight. Other options include councils and the Department of Transport and Main Roads upgrading the Alpha-Clermont Road outside the scope of the Project. The Proponent encourages innovative transportation and logistics opportunities to assist the Project and will consider any viable option.

20.4.2 Emerald and Central Highlands Regional Council

20.4.2.1 History and Settlement

20.4.2.1.1 Baseline

The Central Highlands Regional Council (CHRC) area was created in March 2008 following a recommendation by the Report of the Local Government Reform Commission released in July 2007 (Local Government Reform Commission, 2007). The council covers an area of 59,888 km² from

Arcadia Valley in the south, to the Peak Ranges in the north and in the east from Boolburra to Bogantunga in the west. The council is predominantly agriculture though mining has been offering increased wealth and employment opportunities in the region since the 1950s.

The coal mining potential of the Central Highlands region was first espoused by Ludwig Leichardt when he noted that coal around Blackwater looked similar to the rich coal seams identified in the Newcastle area when he explored the region in 1845. Coal mining quickly became an important industry in the region around Blackwater. Copper and gold were discovered in several locations throughout the region in the 1880s leading to a brief flurry of mining activity; however agriculture remained the dominant industry for at least the next century. Over this time, the focus of agriculture has shifted from cattle and sheep grazing to cropping with the establishment of the British Food Industry Corporation in 1948 and the construction of the Fairbairn Dam in 1972.

Emerald is a large, modern country town that was established in 1879 as a base for building the western railway. The town is named after 'Emerald Downs Hill', a lush emerald-green hill located just north of town. Emerald is now considered the 'hub' for the Central Highlands and the 'gateway' to the Sapphire Gemfields; the largest and one of the richest sapphire fields in the southern hemisphere. The town is located 917 km north-west of Brisbane and about 280 km west of Rockhampton (About Australia, 2010). Plate 20-2 shows a road train typical of the vehicles operating the inland transportation network around Emerald.

The area around Emerald was subject to an extensive clearing program during the 1880s and 1890s and the majority of the area's Indigenous population was shifted closer to the coast. As a result there are no continuous Indigenous communities living around the Emerald area.

Plate 20-2 Typical Road Train in the Region



Source: HPPL

The construction of the Fairbairn Dam made large scale coal mining a possibility in the region, and from the 1970s mining has become a significant industry in the region. Emerald is the largest town in the southern Bowen Basin and services a number of mines around the area. Since 2000 the mining boom has resulted in significant activity around the Emerald area. There are a large number of FIFO workers in Emerald while young families of coal mining employees are increasingly moving to the region. There is also a strong mining service industry in Emerald. As a result of this activity, Emerald has experienced steady population growth and development.

Emerald experienced a one in 100 year flood in 2008, when heavy rain in the Drummond Range catchment area caused Fairbairn Dam to overflow. More than 1,000 houses were affected and 2,500 residents needed to be evacuated.

20.4.2.1.2 Impacts and Mitigation

The Project is not expected to result in changes to the perception of CHRC or Emerald as both are already viewed as a mix of agriculture and mining. The Project is also located outside of the region; however the Capricorn Highway will be a major access route to the Project site.

The Project has the potential to have a positive impact on the history and settlement of the area by maintaining the status quo and providing increased opportunities, without directly impacting land allocation within the council. This however is expected to be low.

20.4.2.2 Demographic

20.4.2.2.1 Baseline

The following key points about the CHRC were identified (ABD, 2010 b):

- As at 30 June 2009 the estimated population was 30,403;
- At the time of the 2006 Census, 894 people or 3.4% of the population stated they were of Aboriginal or Torres Strait Islander origin;
- As at 30 June 2008, 70.2% of the population were of working age (i.e. 15 – 64);
- At the time of the 2006 Census, 53.3% of families were couples with children, while 8.9% were one-parent families; and
- At the time of the Census, the population was expected to grow at an average annual rate of 2.1% between 2006 and 2026.

20.4.2.2.2 Impacts and Mitigation

In its current form, the Project is more likely to have positive impacts associated with population growth than negative impacts on the regional demographic. As discussed in Section 20.4.2.2.1 the Capricorn Highway is one of the main access roads to the Project site, which may make Emerald attractive to people wishing to relocate to the area for employment purposes. Emerald is also the location of a number of mine-specialist training providers which may be utilised by the Project, resulting in potential increases to the non-resident population of the town.

The population of Emerald grew by approximately 20.1% between 2004 and 2009. As a result there are significant demands on housing in Emerald. This combined with limited supply has led to high prices which may serve as a limiting factor to potential population growth. Significant population growth (>5.0% - Burdige 2004) would be measured at ~ 865 residents for Emerald. This is not anticipated to occur as a result of the Project, however the Stage 2 SIMP consultation will identify means for tracking population changes, recognition of sources (the Project, other projects or cumulative), mitigation options and responsible authorities. It is important to note that managed residential population growth is an objective of the CHRC. The SIMP will also consider defining 'manageable' for each regional council, in consultation with the councils. The definition of manageable for each council will be different, and will change over time (either because of the Project or for other reasons).

20.4.2.3 Culture and Community Dynamics

20.4.2.3.1 Baseline

The following key points about the demography of CHRC were identified (ABS, 2010):

- At the time of the 2006 Census, 23.2% of those aged 15 and over were volunteers with the regional council;
- At the time of the 2006 Census, 54.3% of people in CHRC were living (usually residing) at a different address five years earlier;
- At the time of the 2006 Census, 8.3% of people living in CHRC stated they were born overseas; and
- At the time of the 2006 Census 8.5% of the population were in the most disadvantaged quintile of the SEIFA index; while 19.6% of people were in the least disadvantaged quintile.

The community of Emerald appears to be becoming more settled, with a higher proportion of the population having lived in the area for longer at the time of the most recent resident's survey than during previous surveys. Mining is a part of the social fabric and is well established. However the potential negative impacts of mining were highlighted as a concern for respondents regarding living in the area, particularly for those in rural areas.

20.4.2.3.2 Impacts and Mitigation

The impacts of the Project on culture and community dynamics are again primarily in maintenance of the *status quo*. This is assessed as a low positive impact because of the well established mining component of the community.

The Project was also assessed as having a potential impact on lifestyle due to increased wages as more people are able to seek employment in mining. This was again assessed as a low positive because mining is already well established in the region, providing the highest proportion of income of any industry in the region.

As discussed previously the SIMP will include a means of monitoring community change associated with culture and community dynamics. There has been evidence of issues in other communities where multiple mining companies employ residents, including competition between companies, and relationships in the community aligning with one company versus the other. This is not necessarily a norm but could be an issue worth looking into. Council could prove to be an important liaison between multiple projects and companies to manage this, and will be consulted regularly in order to maintain a positive and proactive relationship.

20.4.2.4 Housing and Accommodation

20.4.2.4.1 Baseline

The following key points on the housing and accommodation in CHRC were identified (OESR, 2010, ABS, 2006):

- In the 12 months ending 31 March 2010, there were 264 dwelling units in new residential buildings approved in CHRC representing a total value of \$7.041 billion; and
- At the time of the 2006 Census there were 4,478 private dwellings in Emerald, of which 4,001 were reported to be occupied. Of those occupied 71.7% were family households, while 15.3% were single-person households.

The Department of Communities (Housing and Homelessness Services) has conducted two studies into housing affordability in CHRC over the last two years. These studies have found that housing prices have increased significantly over recent years, with average weekly rent above the state average. They also found that a lower proportion of houses are fully owned or being purchased, while a higher proportion is rented from their employer, parks or other unstated. The number and proportion of affordable rental stocks decreased between 2004 and 2009 in almost all categories and in all CHRC LGAs. Low income households account for a smaller proportion of households purchasing houses; however of those that do there is a higher proportion spending more than 40% of their income on housing.

These studies were supported by community consultations in Emerald which indicated that housing prices had increased dramatically, and were prohibitive for people outside of the mining sector.

20.4.2.4.2 Impacts and Mitigation

In its current form, the Project is not expected to significantly increase population in Emerald and therefore is assessed as a potential low impact on housing and accommodation (see Section 20.4.2.2.2). However this could change if people choose to move closer to the Project site and see Emerald as a good option because of the facilities and services available. Also, there is a large amount of industrial land available in Emerald and CHRC which may attract new mining service businesses to the area resulting in population growth. The SIMP will consider options for tracking housing stock in the community and reasons for changes. The Proponent will also consider working with councils to help expedite the process of land release from the State government for development.

20.4.2.5 Health, Wellbeing and Social Infrastructure

20.4.2.5.1 Baseline

The following key points were identified about the Health, Wellbeing and Social Infrastructure in CHRC:

- There is an emergency hospital offering a range of services in Emerald. The hospital services the greater CHRC and surrounding areas;
- There are permanent QAS stations in Emerald and Anakie;
- At the time of the 2006 Census 1.9% of people in CHRC were in need of assistance with a profound or severe disability; and
- There was an average annual increase in birth rates of 4.2% between 2001 and 2007.

There are also health and wellbeing services through the regional council and State government available. There are nine dental practices serving the Emerald region and local stakeholder consultations indicated a high degree of satisfaction with these services.

There are a number of regional service providers in Emerald who specialise in providing health care and social services to Indigenous people including; Central Highlands Aboriginal Corporation; Emerald Community and Primary Care; Housing and Homelessness Services; and Emerald Work Readiness Program run by Goldings Contractors and Salvation Army.

Emerald has several community organisations and networks including Anglicare, Lifeline, Central Highlands and Western Queensland Family Support Association, St Vincent de Paul and St Vincent's Community Nursing Services, Royal Queensland Bush Children's Health Scheme, and Salvation Army Employment Plus.

20.4.2.5.2 Impacts and Mitigation

The Project could result in increased drug and alcohol abuse, violence including domestic violence and gambling (high disposable incomes and free time on days off). This impact has been assessed as low because of the low population growth anticipated as a result of the Project (see Section 20.4.2.2.2) and low unemployment in the area due to other employment opportunities (Section 20.4.2.7.2). The vices are commonly attributed to mining communities, although with no literature available indicating these incidences occurred at higher rates in mining families than the general population suggesting that this is more a perception than a reality. Regardless, the SIMP will identify existing programs in Emerald or other parts of CHRC to support management of this potential impact.

The Project has the potential to result in increased wages, which in turn leads to increased disposable incomes. This has the potential to result in both positive and negative (as discussed above) impacts. The positive impacts can be felt by both the individuals/families that benefit as well as regional businesses, through increased sales. There is research indicating a link between higher, lower stress and anxiety levels and greater happiness, although this seems to have a threshold at which further increases stop resulting in consequential increases in happiness. In order to maintain the positive impact of increased wage levels, the Proponent will explore options to provide financial planning and counselling services to employees. Opportunities to provide these services by using existing services located in the area will be explored as part of Stage 2 of the SIMP.

20.4.2.6 Education and Training

20.4.2.6.1 Baseline

The following key points on education and training opportunities in CHRC were identified (OESR, 2010):

- In the 12 months ending 31 December 2008, 77.4% of students attending school in CHRC attended a government school and 22.6% attended a non-government school; and
- At the time of the 2006 Census, 46.7% of persons aged 15 and over in CHRC had post-school qualifications.

There are currently 290 children on waiting lists for childcare in Emerald, with availability in day cares for infants and toddlers (0-2 years) a particular problem. The CHRC is working to attract new childcare providers to Emerald to address this shortfall, however reported providers are having difficulty securing finance and accessing qualified staff.

There are a number of private education providers with a particular focus on the coal mining industry based in Emerald. These include:

- Lennon Training – accredited courses include general mining, coal competencies, scheduling and rescue;
- Capricornia Training – industry focused organisation working with local organisations to help recruit apprentices, trainees and up skill existing staff; and
- Central Highlands Safety Services (CHSS) – focuses on risk management and safety in the resource industry. Based in Rockhampton however provides a number of coal focused courses in Emerald and on site at mines.

20.4.2.6.2 Impacts and Mitigation

The Project is expected to have potential impacts on demand for services provided by education and training institutions in Emerald. This would include in particular a focus on mine skills, health and safety, and coal mine competencies. Because of the limitations on accommodation in Emerald, some of this training may be provided on the mine site or in the local community rather than on campus in Emerald. The impact of this is expected to be a low positive. There is a low potential for this training to be shared by the community which would extend the benefit. Again, this would be a positive impact on the community.

Population increases may result in further pressures on child care which may provide the justification required to open new centres, while schools may reach critical mass and acquire additional resources. Population increases however have been assessed as a low probability as discussed in Section 20.4.2.2.2.

20.4.2.7 Labour Market and Employment

20.4.2.7.1 Baseline

The following key points on the labour market and employment opportunities in CHRC have been identified (OESR, 2010):

- The smoothed unemployment rate for CHRC as at March quarter 2010 was 2.6%; and
- At the time of the 2006 Census, 22.3% of employed usual residents in CHRC were employed in mining, the largest employment industry in the region.

Unemployment rates in Emerald were 1.9% at the time of the 2006 census. Consultation indicated that the unemployment rate continues to be at this low level in 2010. The most recent available statistics, those from the 2006 Census showed that coal mining accounted for 14.5% of all employment in Emerald. This was significantly more than the next highest industry, school education which accounts for around 5.1% of employment. Other significant industries for employment were heavy and civil industry (3.4%), supermarket and grocery stores (3.0%) and food service industry (2.9%).

20.4.2.7.2 Impacts and Mitigation

There is potential for workers from other industries to transfer to mining as a result of the Project; however, this has been assessed as low, since there are already a number of mining opportunities around Emerald and the surrounding area. For a town like Emerald, this is probably more perception than reality; however it could occur and have an impact on other industries. Councils tend to be particularly concerned about loss of staff to the mines, particularly from community liaison type roles. Council has also suggested worker sharing possibilities and apprenticeship possibilities that the Proponent will explore on an ongoing basis with council.

The potential for increased employment opportunities has been assessed as a medium positive impact. This impact is a potential spin off from the cumulative effect of this and other mines. Given the current low level of unemployment in Emerald however, these opportunities are likely to impact migrants to the region rather than existing residents. Population growth however is expected to be minimal as discussed in Section 20.4.2.2.2.

20.4.2.8 Industry and Business

20.4.2.8.1 Baseline

The following key points on industry and business in CHRC were identified (OESR, 2010):

- The total value of agricultural production in CHRC during 2005-06 was \$449.6 million, representing 5.2% of all agricultural production in Queensland; and
- In 2006-07 there were 2,991 businesses in CHRC, 0.7% of all Queensland businesses.

Mining is a significant industry in CHRC contributing approximately \$2.6 billion to the region's GRP in 2008-09 (59.2% of total GRP of the region). This was a 27.3% increase on the previous year, demonstrating that mining in the Bowen Basin continues to grow.

The CHDC runs a program called Hi-Net which links small businesses together to enhance their capacity so that they are eligible to tender for and win mining contracts. The program was originally established by the Emerald Chamber of Commerce, with support from mining proponents located throughout the area. As well as establishing the linkages between businesses, Hi-Net also provides training and assistance to help businesses understand and comply with the contractual requirements of mining companies.

20.4.2.8.2 Impacts and Mitigation

The Project may result in an increase in service clients for businesses in the area. In particular, Emerald has a number of companies who provide services to the mine who have the opportunity to extend these services to support a new client – the Project. This is seen as a low positive impact, however may be increased through local and regional procurement policies. Other local businesses also have the potential to benefit through the provision of services to mine personnel. Again this is considered to be a low positive because of the limited population growth anticipated (see Section 20.4.2.2.2).

20.4.2.9 Income and Cost of Living

20.4.2.9.1 Baseline

The following key points on income and cost of living in CHRC were identified (OESR, 2010):

- At the time of the 2006 Census, there were 6,152 people in CHRC who stated that their gross weekly individual income was lower than \$400 (31.1% of all persons aged 15 and over). There were 1,885 persons who stated their gross weekly individual income was greater than \$2,000.

At the time of the last Census (2006), the median individual income gross weekly income in Emerald was \$689 and the median family income was \$1,796. The median household weekly income was \$1672. These income levels were significantly higher than those across Queensland as a whole, which is largely attributable to mining in the area. Median rental prices in Emerald were approximately \$320 - \$550 (Realestate.com.au, 2010).

20.4.2.9.2 Impacts and Mitigation

The Project has the potential to further increase housing and accommodation prices in the area, impacting on cost of living in the area. There could also be a slight increase in the cost of living associated with increased mine employment (vendors increasing prices) however this was assessed as a low negative because there is already significant mining employment in and around Emerald.

There is also the potential for positive impacts from the high wages associated with mining. This was assessed as a high positive; however the potential number of people to experience this was not included in the assessed impact ranking. It is important to note for context that the potential number of people to experience this is not expected to be significant given the other mine opportunities in the area and region as a whole.

20.4.2.10 Governance

20.4.2.10.1 Baseline

The following key points about governance in CHRC were identified:

- CHRC covers an area of 59,888 km² (3.5% of the total area of Queensland); and
- CHRC is made up of a Mayor, a Deputy Mayor and seven Councillors.

CHRC has recently amended the CHRC 2009-2014 Corporate Plan and is currently seeking community comment and feedback on the draft before finalisation. The draft plan documents CHRC's vision as *shaping the future by 'valuing people, partnerships and place'*. Its mission is to *'be a region working in partnership to foster sustainable development and vibrant communities'* (CHRC, 2009).

CHRC is still adjusting to the March 2008 amalgamation process to form a regional council. This is a common challenge across Queensland, particularly where the amalgamation has involved multiple former shire councils over vast areas.

CHRC has extensive experience in managing the impacts of mining and have developed programs and partnerships to best maximise potential benefits while minimising negative impacts through mitigation.

CHRC is a part of the Central Queensland Regional Planning area. The area does not currently have a statutory plan guiding regional development. This is an opportunity for a more strategic long-term approach to be taken to managing the development of the region.

20.4.2.10.2 Impacts and Mitigation

There is a potential impact to the community if the Project fails to effectively engage in regional planning processes. This was assessed as negative medium impact. The outcome would be that the regional planning process, which has recently commenced, does not adequately consider potential social impacts on the community as a result of the Project. At present, there is not a statutory regional plan covering the Central Queensland region. There is an opportunity for the Project to be involved in the development of such a plan. This could help ensure potential impacts are considered and infrastructure or development requirements are provided for. The Project will continue to explore opportunities with council to align planning where possible.

A further potential impact was considered to be the potential for the Proponent to not effectively engage local council in its community committee or to link in with regional community development programs and activities. CHRC has extensive experience with mining in the region. They also run and coordinate a number of community development programs. Through engagement with the council the Proponent will be able to provide targeted support and engage more effectively with these programs to ensure targeted and appropriate outcomes for the community.

20.4.2.11 Primary Infrastructure and Access

20.4.2.11.1 Baseline

The following key points were identified about primary infrastructure and access in CHRC:

- The CHRC operates a regional airport in Emerald with regular commercial services. The council also operates airstrips in Capella, Dingo, Duaringa, Rolleston and Springsure (CHRC 2010); and
- The Gregory Highway connects Emerald with Clermont and the towns in the southern Central Highlands. The Capricorn Highway connects Emerald and Alpha.

At the time of the 2006 Census, 64.7% of private houses in Emerald reported having an internet connection.

The Emerald airport is the largest airport in the region. It has approximately 27 scheduled flights per week and services the surrounding area. Emerald airport is currently undergoing a \$7.7 million upgrade which is scheduled for completion in September 2010,

Emerald has almost reached capacity in terms of new electricity connections for residential and business development. Ergon Energy purchased a piece of land for the development of a new substation; however, CHRC is unsure of when development will commence at this site.

20.4.2.11.2 Impacts and Mitigation

The Capricorn Highway between Emerald and Alpha is likely to be the main access route to the Project site. The highway is in relatively good condition, with speed limits of 100 km per hour along most of this section. The highway is heavily used by freight vehicles and tourist traffic. The additional usage required for the Project, particularly during construction phase when it is likely that oversized and large loads will be transported to site, may result in additional funding being allocated to support an upgrade to the road so that there are overtaking lanes in this section. The State government has committed to maintenance and upgrade of the Capricorn Highway.

The increased traffic through Emerald that may result from the Project has the potential to generate additional state funding to support the proposed Western Link Road. The Western Link Road which will run through the industrial estate to the west of Emerald would connect the Capricorn and Gregory Highways, diverting heavy vehicles away from the town. Funding is yet to be obtained for this development.

20.5 Local Study Area

The overview of the local study area presents key baseline data, potential impacts and mitigation for Alpha and the Barcaldine Regional Council (BRC) area. The SIA technical report in Volume 5, Appendix M presents the data in a more traditional format where baseline, impacts and mitigation are separated into different sections.

20.5.1 Alpha and Barcaldine Regional Council

20.5.1.1 History and Settlement

20.5.1.1.1 Baseline

Barcaldine Regional Council (BRC) came into existence in March 2008 through the amalgamation of the former shires of Aramac, Barcaldine and Jericho following a report from the Local Government

Reform Commission released in July 2007. BRC is located in the central west region of Queensland, and covers an area of approximately 53,677 km², 3.1% of the local state area (OESR, 2010). Plate 20-3 shows Barcaldine area residents at the Barcaldine Show in 2010 at the Project information display.

Plate 20-3 Barcaldine Show Attendees at the Project Information Display



Source: HPPL

BRC is made up of small rural centres and a number of agricultural properties. The area was originally settled by pastoralists, and then the railway push west during the 1880s. The main communities are Barcaldine (town), Alpha, Jericho, Aramac, and Muttaborra. Agriculture is the main industry, and consultations indicated that while there is some sheep grazing in the western parts, the area around Alpha is largely cattle grazing country. As such, the area is susceptible to market fluctuations and environmental conditions and there is little room for value adding to build the economy.

Alpha is a small community on the Capricorn Highway, approximately 450 km west of Rockhampton and 250 km east of Longreach. Clermont is located 184 km to the north and Tambo 134 km to the south along a gravel road. Alpha was settled in 1884 following the push of the railway line west from Emerald and through the Drummond ranges. The town is located to the south of the Belyando River. In addition to the railway station, Alpha was also a coach stop for the service to Tambo. Following settlement there were a number years of good rains, and there was an underground water supply.

The town grew steadily and in the 1950s and 1960s good wool and beef prices brought sustained prosperity to the region. Rural depression during the 1970s however resulted in a downturn and saw closure of some services, including the lay-staffed Catholic school. During the late 1990s and early 2000s there was a sustained period of drought and falling margins making farming in the area harder.

Barcaldine, the largest town in BRC, took its name from a nearby station, Barcaldine Downs. The town is located at the junction between the Capricorn and Matilda Highways approximately 520 km to the west of Rockhampton. Barcaldine is the administrative centre for the BRC and is the location of most services in the council area. Barcaldine is best known as the meeting place for the Great Shearer's Strike of 1891. The strike was widespread across the country, however Barcaldine was the location for

meetings of the leaders, and the Tree of Knowledge in town became a memorial to this struggle. The outcome of the strike was the formation of the Australian Labor Party (ALP).

20.5.1.1.2 Impacts and Mitigation

The Project will change the profile and settlement patterns of the mining lease irreversibly. The area will no longer be a cattle grazing, farming region but will instead be a mine. This is considered to be a very high negative on the mining lease area specifically. The local study area and Alpha in particular have been associated with cattle grazing since settlement, however with the development of the Project, the perception and profile will change to include mining. This will also result in a high negative impact on the local area. Over time this impact is expected to reduce as people become accustomed to the shift, and recognise the benefits of diversification of the economy. There are a number of towns throughout the Bowen Basin which provide an example for Alpha and the region, whereby they were primarily focused on agriculture, but grew to include mining as an important element. The history of these towns is now based around a strong agricultural sector which remains vibrant and a very important mining industry providing additional wealth and income to the area. Over time, it has been assessed that this shift will actually become a positive for the community, because of the economic diversity it provides and the new dynamism it can potentially bring to the community. Communication, which promotes the benefits of this shift will be an effective tool for managing this process.

It is inevitable that some people who have lived on their properties which lie within the mining lease for generations will have to move as a result of the Project. This is considered to be a very high negative for those people involved. Given that there are a limited number however, the impact will not be widespread. Communication and ongoing support to these people will help to mitigate this impact, and as they are resettled on alternative land they will be forging a new history.

There is a possibility of people moving to Alpha from other parts of BRC for employment generated by the Project. Because of the nature of Alpha as a small community where everyone knows one another, and a sense of fear of 'outsiders' seems to exist, this impact was assessed as a high negative. However this impact was not assessed to be a negative over a long period of time because people from other parts of BRC may be known in the community, and they will have similar rural values. Mitigation will include improving service provision through additional funding, and providing personnel with a community and workplace induction. As a result of the time and the mitigation it is expected that there will actually be a positive impact from new people moving to the town, provided adequate services will be provided. This is because of the critical mass required to ensure that Alpha remains a stable rural community and maintains its current service levels.

The mining lease will establish a no-go zone which will lead to increased distances between properties, potentially causing a breakdown in social networks. This has been assessed as a medium negative however because of the region's isolation, which means they are used to travelling long distances to see people and access services.

The Project will also result in a decrease in available land for cattle grazing within the mining lease area and in the BRC as a whole. This has been assessed as a low negative because of the significant amount of land available throughout the region that will remain available for cattle grazing.

The potential for people to move to BRC from other areas of Queensland was also assessed as low negative. The reason for this is that the assessment found the possibility to be low given the relative isolation of the area and the limited services available which will limit the number of people moving

there. Those that do move to BRC will be actively seeking a rural lifestyle and will adapt to the community.

Community perception of the negative impacts of mining on health and the environment may make selling properties more difficult and decrease the land value in the region. This has been assessed as a low negative however as there is already a limited market for rural property sale due to the urbanisation trend across Australia.

20.5.1.2 Demographic

20.5.1.2.1 Baseline

The following key points on the demography of BRC were identified (OESR, 2010):

- As at 30 June 2009, the estimated residential population of BRC was 3,376 people, 0.1% of the total population of Queensland;
- At the time of the 2006 Census, there were 194 persons in BRC who stated they were of Aboriginal or Torres Strait Islander origin. This represented 5.9% of the total population;
- At the time of the 2006 Census, in BRC 36.8% of persons were living (usually residing) at a different address five years earlier; and
- At the time of the 2006 Census, there were 4.6% of persons who stated they were born overseas.

Since 2004, BRC has experienced negative population growth of approximately 0.4% per annum, peaking at 0.9% in 2008-09. The main reason for this was the extended period of drought, the decreasing margins in cattle grazing and the limited opportunities for career employment in the region.

The estimated population of Alpha town as at 30 June 2009 was 416, while the population of Alpha State Suburb, which includes landholders in the surrounding region was at the time of the 2006 Census 610.

20.5.1.2.2 Impacts and Mitigation

A 5% change in population is considered to be significant from a population perspective (Burdge, 2004). A change of this scale in Alpha town equates to ~21 people. Given estimates of the number of jobs which will be local (150) and consultation indications that a proportion of people who are employed in the mine will choose to live in the local area, this can be considered possible at least. The impact of a change in population above 5% was assessed as very high negative, because of the pressures it will place on existing services such as health and education, as well as on infrastructure such as water and electricity supply.

There is the potential that the population increase will result in a percentage increase in the population who are of working age, and male. This can be perceived by the community as potentially resulting in increases in crime and violence. However this potential impact was assessed as a low to medium negative because this group already represents a higher proportion of the population in BRC. An increase in this demographic would be an amplification of a current trend rather than a new trend for the region.

Population increase is required to ensure Alpha maintains existing service levels and remains a stable community. Provided sufficient services and infrastructure can be developed, population growth has the potential to be a medium positive impact for people moving to Alpha from within BRC, and a low positive impact for people moving from outside the area to Alpha. The distinction between people from

within and those from outside of BRC was identified because of the increased likelihood that those from within BRC will be a part of the Alpha community's extended social networks and share the same rural values than those moving from other parts of Queensland.

As discussed previously, the Stage 2 SIMP consultation will identify means to monitor population change and develop mitigation responses and authorities responsible based on the trends identified. The SIMP will also define manageable for each population centre in consultation with local government.

20.5.1.3 Culture and Community Dynamics

20.5.1.3.1 Baseline

The following key points on the culture, and community dynamics of BRC were identified (OESR, 2010):

- At the time of the 2006 Census, 32.7% of the population aged 15 years and over were volunteers with the BRC;
- At the time of the 2006 Census, 36.8% of the BRC population lived (usually resided) at a different address five years earlier;
- At the time of the 2006 Census, 4.6% of people in BRC stated that they were born overseas; and
- At the time of the 2006 Census, 45.7% of people in BRC were in the most disadvantaged quintile while 6.5% of people in were in the least disadvantaged quintile (i.e. most advantaged).

The culture of BRC is largely rural, with a strong sense of family values. Alpha is a highly cohesive, tight-knit community with residents highlighting everyone knowing one another and the rural values of the area among the things they most like about living there. Many residents are concerned that mining coming to the community will change this dynamic and result in decreased security and safety.

20.5.1.3.2 Impacts and Mitigation

The Project in its current form is likely to change community dynamics and alter the *status quo* by increasing wealth disparity and potentially breaking down community cohesion. This was assessed as a high negative. The potential that new people moving to the area may result in a decrease in the sense of security in region was also assessed as a low negative. A potential change in the community from agriculture to mining and alteration to existing social networks are also possible impacts of the Project. These were assessed as medium negatives because while mining may add some alternative options to the community, the majority of people are expected to still be engaged in agriculture and rural life will remain an integral element of community life.

As discussed previously, the SIMP will include a means to monitor changes in culture and community dynamics in Alpha and across BRC. There have been problems in small population centres like Alpha as a result of the presence of multiple mining companies. This is something that will be managed through coordination, and by drawing upon lessons learned from similar communities in the Bowen Basin..

There is potential for local capacity building through the provision of courses such as First Aid to mine personnel. Because of the existing limitations on capacity in Alpha, this has been assessed as a high positive. While there is the potential for increased wages to result in a greater wealth disparity, there is

also the potential for them to benefit the community through lifestyle changes. Higher wages mean more disposable income which can be used for wealth generation and entertainment. This has been assessed as medium positive impact.

The Stage 2 SIMP will include consultation to determine appropriate strategies to enhance the potential benefits of the Project on the community. These strategies will be refined in consultation with local council and stakeholders but may include providing courses in Alpha town and opening them to the community, considering options to provide financial management services and information to personnel and the community.

20.5.1.4 Housing and Accommodation

20.5.1.4.1 Baseline

The following key points on the housing and accommodation were identified for the Barcaldine Regional Council area (OESR 2010, ABS 2006):

- In the 12 months ending 31 March 2010, there were 9 dwelling units in new residential buildings approved in Barcaldine Regional Council, which represented a total of \$2.5 million;
- At the time of the 2006 Census there were 300 private dwellings in Alpha, of which 235 were reported to be occupied. Of those, 60.4% were occupied by families while 28.9% were lone-person households; and
- At the time of the 2006 Census there were 858 private dwellings in Barcaldine, of which 711 were reported to be occupied. Of those, 58.4% were occupied by families, while 23.1% were lone-person households.

There has been a substantial increase in the price of land and housing in Alpha over recent years. This is largely based around speculation over possible mining development in the region and is fuelled predominantly by investors from outside of the local region.

There are limited land plots available for development in Alpha. BRC auctioned 10 blocks in May 2010 for an average price of \$111,000 plus GST each. There are an additional 20 blocks which will be auctioned over the coming months. Apart from a few private blocks, these are the only blocks available for development in Alpha at present. There is no other residential zoned land available, though BRC did indicate they were exploring an opportunity for up to 200 more lots with State government. A further limitation to housing development is insufficient electricity supply, limited water availability and a lack of integrated community sewerage system.

20.5.1.4.2 Impacts and Mitigation

Any population growth associated with the Project will result in increased demand for housing in Alpha. Because of the limited supply this will push up the prices for both purchasing and renting houses. There is already evidence of this occurring based purely on speculation. While increased house prices are beneficial for landowners or investors, this benefit can only be realised if the property is sold and one purchased at a lower price. This has been assessed as very high negative. Experiences in other similar towns in the Bowen Basin, where housing shortages are critical, have resulted in substantial increases in rent and housing prices, with rent in some cases now more than double that of the state median. There will be a similar increase in demand for short-term accommodation which is also in limited supply in Alpha. This has been assessed as a high negative.

The potential for demand to outstrip supply and for street amenability to fall as tenants allow properties to become run down were assessed as potential low negatives.

There is also potential for these negative impacts to be reversed into positives. As it is currently designed, the Project will result in increased demand for short term accommodation because of consultants and contractors servicing the Project and requiring accommodation. This has been assessed as a high positive. There is also the potential that there will be a very high positive impact as increased demand leads to an increased supply of houses as investors capitalise. These increases will result in more opportunities for investment in housing and short-term accommodation by providers, a high positive.

As discussed previously the SIMP will consider options for tracking population trends and housing stocks in the community. The Proponent will also consider working with councils to help expedite the process of land release from the State government for development.

20.5.1.5 Health, Wellbeing and Social Infrastructure

20.5.1.5.1 Baseline

The following key points about Health, Wellbeing and Social Infrastructure were identified for the BRC:

- At the time of the 2006 Census, 2.9% of the population were in need of assistance with a profound or severe disability (OESR, 2010);
- There are emergency hospitals in Alpha and Barcaldine;
- There is no permanent doctor located in Alpha; and
- There is no Queensland Ambulance Service (QAS) station in Alpha, the area is serviced by a hospital ambulance attended by a volunteer driver and nurse. There is a QAS stationed in Barcaldine (pers. comm., 2010).

The lack of a permanent doctor and QAS ambulance service in Alpha were listed as two of the things residents disliked most about living in the area. While there is a hospital, patients can only be admitted when there is a doctor on duty.

There are other health care facilities in Alpha including Home and Community Care (HACC), Royal Flying Doctor Service (RFDS) coverage, a visiting doctor, a hospital and now also a private pharmacy and a Patient Transport Service that provides subsidized transport to other centres for patients.

There are two organisations in the BRC area dedicated to providing health and community support services to Aboriginal and Torres Strait Island people, both are located in Barcaldine - Aboriginal and Islander Health Team and Central West Aboriginal Corporation.

For a community of its size, there are a number of sports and recreation activities available in Alpha. There are also a number of community services and organisations, the majority of which are volunteer run, including Meals on Wheels, the Alpha Queensland Country Women's Association, and Barcaldine Family and Returned Service League Barcaldine.

20.5.1.5.2 Impacts and Mitigation

The Project will result in increased traffic which brings with it a greater potential for accidents. This has been assessed as a very high negative. The reason for this is that although the likelihood of their being an accident is low, the magnitude of the potential impact is very high for those involved and their families. Driver fatigue related to project personnel travelling to and from the site and undertaking a

long, 12-hour shift resulting in increased accidents, has also been identified as a potential high negative impact of the Project. The SIMP will identify any existing programs which will reduce the potential for more accidents to result from the Project, including drawing on lessons learned from the Bowen Basin where accidents are considered one of the biggest impacts of mining where applicable. The Proponent will engage actively with police to support traffic management and consideration will be given to adopting a maximum work day of 12-14 hours which includes travel to reduce the potential for fatigue. The Proponent will also provide BIBO services to bring personnel from regional areas to the project site, to minimise driver fatigue and the Project's impact on increased traffic.

As it currently stands the Project has the potential to increase demand on Alpha hospital as well as other local services and facilities. The potential impact on the hospital has been assessed as very high, while it is considered high on other facilities. The potential for increased demand on other emergency services in Alpha including Police was also assessed as a high negative. The Proponent will proactively engage with local emergency services and will establish a 24-hour on-site medical clinic to minimise the impact of the Project directly on hospital demand. Consideration will also be given to provide counselling and other services to personnel and the community. Conversely, population growth as a result of the Project has the potential to result in increased availability of services in Alpha, potentially having a very high positive impact on the community. Population growth and community-based training may also result in enhanced capacity within the community to respond to emergencies. As discussed in Section 20.5.1.2 the SIMP will identify means to monitor population growth as a result of the Project and will document strategies based on identified trends. The SIMP will also identify means of monitoring demand on emergency services in Alpha and develop strategies to address emerging trends and identify additional resources when required.

Coal mine generated dust is commonly perceived as having negative impacts on community health. This appears to be largely perception based as there is little literature to accurately show the impact of dust on community health and evidence that has been provided is generally anecdotal. Despite this, the impact has been assessed as a high negative. Community consultations also identified concerns about road dust as a result of increased traffic as a concern. This was assessed as high negative. The Proponent will distribute key findings of the EIS about the potential for dust to reach the community.

New people moving to the community can have the potential to impact on resident's sense of security and safety. This in turn may lead to increased stress and anxiety. This was assessed as a high negative. The SIMP will identify means of monitoring community crime and deviance levels, while the Proponent will provide workers with an induction, establish workplace policies to minimise the potential for increased crime and proactively engage with the police.

There is a belief that there are higher rates of social deviance and problems in mining communities. It is possible that higher wages (and therefore greater disposable incomes) combined with free time during days off, has the potential to result in increases in drug and alcohol use as well as more gambling. However there is no research literature to support the belief that these problems occur at a higher rate in mining communities than among the general population suggesting that this more a perception than a reality. Nevertheless, the SIMP will identify any existing programs across the region and explore opportunities to expand these programs into BRC and Alpha.

Higher wages associated with the mining industry are a benefit of the Project. However, if they are used in an unsustainable manner can actually result in negative outcomes, particularly if there is an economic downturn and a reduction in employment levels. The Proponent will consider providing

financial planning services to personnel and the community to help maximise the benefits associated with higher wages. Like many other rural communities, Alpha is heavily reliant on volunteers for sports and recreation activities. Population increase may provide a larger pool of potential volunteers, improving and extending current activities and options, resulting in greater choice for the community. The Proponent will encourage personnel to undertake volunteering in the community and will sponsor local sporting and community groups to maximise and enhance these benefits, while the SIMP will monitor the availability of recreation and sporting activities, community participation levels and volunteer participation rates.

20.5.1.6 Education and Training

20.5.1.6.1 Baseline

The following key points on the education and training opportunities of BRC were identified (OESR, 2010):

- In the 12 months ending 31 December 2008, 94.8% of students attending a school in BRC attended a government school and 5.2% attended a non-government school; and
- At the time of the 2006 Census, in BRC, there were 38.0% of persons aged 15 years and over with a post-school qualification.

Without additional qualified child care workers, child care facilities are at capacity in Alpha. Education facilities in BRC are limited. There is a P - Year 10 State School in Alpha. The school also provides grade 11 and 12 courses through distance or virtual education programs. Otherwise students need to travel to Barcaldine for Year 11 and 12. Many students leave the area at this age to obtain an education at either boarding school, or move with their families to regional centres.

20.5.1.6.2 Impacts and Mitigation

Child care facilities at Alpha are currently at capacity unless additional qualified resources can be identified. If there is population growth as a result of the Project as expected (see section 20.5.1.2.1) it is likely that there will be increased demand for child care facilities in Alpha. This impact has been assessed as high negative. As discussed previously, the SIMP will identify ways of monitoring population growth and provide strategies for ensuring this is controlled. Based on these, the Proponent will investigate ways that it can support improved facilities such as supporting BRC in obtaining additional funding or attracting new providers to the region. Consideration may also be given to sponsoring the child care centre to support them to train potential child-care workers or improve facilities. The Proponent will also consider developing a program to promote potential employment opportunities for mine personnel's spouses, particularly in areas of high demand such as childcare.

The mine operations could lead to valuable capacity building opportunities for the community. As discussed in Section 20.5.1.3 there is the potential for additional training opportunities to be delivered to the community as a result of the Project. This has been assessed as having a low positive impact.

Population growth is also likely to have a positive impact on school education by increasing demand at both an elementary and secondary level. Assessing the extent of this however will depend upon current capacity levels and the ability of the school to meet this increased demand. The Proponent will undertake further investigations into the capacity of Alpha and Barcaldine schools and this will be documented in the SIMP. Based on this, the SIMP will monitor population trends as well as identifying strategies and responsibility for the management of increased demand in the local education system.

At the same time, the Proponent will consult with local service providers and support BRC efforts to obtain more funding.

20.5.1.7 Labour Market and Employment

20.5.1.7.1 Baseline

The following key points on the labour market and employment opportunities of BRC were identified (OESR, 2010):

- The smoothed unemployment rate for BRC as at March quarter 2010 was 2.8%; and
- At the time of the 2006 Census, Agriculture, Forestry and Fishing was the largest industry of employment for BRC usual residents, with 33.5% of the region's employed labour force.

At the time of the 2006 Census, unemployment in Alpha was 3.4%, higher than the BRC level of 2.8%. At this time, sheep, cattle and beef grazing was the largest industry of employment in Alpha employing 41.2% of all employed people. Other significant industries of employment were government administration (10.4%), hospitals (6.71%) and school education (5.2%). Mining employment accounted for less than 1% of all employment in the region (OESR, 2010).

The BRC has reported difficulties in retaining staff due to the lure of jobs in the Bowen Basin and elsewhere (Barcaldine Regional Council May 2010).

20.5.1.7.2 Impacts and Mitigation

There is the potential for workers from other industries to transfer to mining as a result of the Project. This has been assessed as high because of the low levels associated with agriculture and the limited career opportunities available in BRC. A limiting factor against this may be the working conditions in the mines; in particular shift work and long hours which may not align with the rural lifestyle residents seek. Councils tend to be particularly concerned about losing their personnel because of this. Even if this shift does not eventuate, there can be a community perception that it is or will happen. The SIMP will document ways of monitoring the number of workers moving from other industries into the mining sector.

Employment opportunities as a result of the Project may lead to there being a decrease in labourers available for agriculture. While unemployment levels are low in BRC, it is possible that there is an underlying level of underemployment with people employed on a part-time or seasonal basis as labourers. Accepting full-time work on the Project may mean these people are no longer available to work on the farms; however this was assessed as a medium impact because they may continue to take on this work because of the shift-work nature of mining and the extended periods they have off. Population growth may result in a larger pool of labourers available effectively negating this. The Proponent will consider profiling labourers to determine if they align with the mine demographic and the SIMP will identify monitoring tools to determine if there is a decrease in labour available.

Increased employment opportunities and greater employment diversity as a result of the Project were assessed as being a very high positive potential impact. Currently there are limited career employment opportunities in BRC and many young people leave the area as a result. New people moving to the area for employment are likely to bring spouses or family with them. There is potential that these spouses will have skills in high demand in the community and be able to fill identified gaps. These positive impacts have been assessed as medium. The Proponent will develop local employment and

procurement strategies and will consider developing a spousal employment program to promote opportunities. The SIMP will identify ways of monitoring local employment trends.

20.5.1.8 Industry and Business

20.5.1.8.1 Baseline

The following key points on industry and business in BRC were identified (OESR, 2010):

- The total value of agricultural production in BRC in 2005–06 was \$109.6 million, 1.3% of the total value of agricultural production in Queensland; and
- In 2006–07, there were 567 businesses in BRC, 0.1% of all Queensland businesses.

Tourism is an emerging industry in BRC and is considered as an excellent opportunity for economic diversification by residents in the region. A focus of the community is on developing tourist attractions to help develop this industry.

Coal and coal seam gas development offers considerable potential for sustainable employment. The Hancock, AMCI, Vale and Waratah Coal mines have development potential within the district. There are opportunities in direct employment with the mines and through contractors providing services to these coal mines. However, residents are also concerned about the potential social and environmental impacts of mining. They are looking to be closely engaged in the issues related to their community and mining and are concerned about balanced information being available.

20.5.1.8.2 Impacts and Mitigation

During construction there will be a large amount of equipment that requires transportation to the Project site. This transport may interfere with the transportation of community and agricultural goods, particularly if roads are closed to allow oversized loads to pass. This has been assessed as a potentially high impact. Transportation of goods can also reduce the number of tourists passing through Alpha, as they try to avoid the heavy vehicle usage of the highway, but this has been assessed as medium as many of the tourists in the region are travelling for extended periods and have more time to reach their destination. The Proponent will consult with local landowners and share information about transportation schedules and potential impacts. The SIMP will monitor coordination between the Project and other potential projects in the region.

As it currently stands, the Project presents a number of opportunities for local business to benefit through the provision of services (such as transportation to the mine, catering and cleaning of the on-site accommodation village) and goods (local produce). However because of the limited number of businesses currently established in the local area and their small capacity this has been assessed as medium. The Proponent will adopt local procurement strategies which preference local organisations where possible. The SIMP will monitor the use of local business in goods and service provision to the Project.

20.5.1.9 Income and Cost of Living

20.5.1.9.1 Baseline

The following key points on the income and cost of living of BRC were identified (OESR, 2010):

- At the time of the 2006 Census, there were 1,065 persons aged 15 years and over in BRC who stated their gross individual weekly income was less than \$400 (42.1% of all persons aged 15 years and over).

At the time of the 2006 Census, the median weekly individual income for persons aged 15 years and over who were usual residents of Alpha (State Suburb) was \$469, compared with \$435 in BRC. The median weekly household income was \$865, compared with \$800 in BRC. The median weekly family income was \$1,048, compared with \$1,041 in BRC (ABS, 2006 Census Community Profile Series).

20.5.1.9.2 Impacts and Mitigation

As it currently stands the Project is expected to have more positive impacts on income and cost of living than negative ones. The higher wages in mining have the potential to push wages up in other industries, however this has been assessed as a low negative because the majority of employees are expected to come from outside of the local study area (see Section 20.3.1.1 and 20.3.2.2).

Conversely the increased wages associated with mining as a result of the Project have the potential to have a very high impact. The limitation on this is the number of people from the local area who are anticipated to be employed on the Project. Over time there is the potential for there to be a larger volume of high wages as the proportion of local residents employed in mining increases, which was assessed as high. Associated with higher incomes comes greater spending capacity. This in turn has the potential to attract new services to the area, considered to be medium.

The Proponent will adopt a local procurement and recruitment policy to maximise the benefits of the higher wages in the community. Opportunities to provide financial planning services will also be considered. The SIMP will identify monitoring measures to track wages in the regional area.

20.5.1.10 Governance

20.5.1.10.1 Baseline

The following key points on the governance of BRC were identified (OESR, 2010):

- At the time of the 2006 Census, there were 50.0% of all occupied private dwellings in the region with an internet connection;
- BRC covers an area of approximately 53,677.3km² (3.1% of the total area of Queensland); and
- The BRC is made up of a Mayor and six Councillors (BRC 2010).

BRC lies within the jurisdiction of the Central West Regional Plan, a statutory long-term strategic framework covering Barcaldine, Blackall, Tambo and Longreach Regional Councils. The plan recognises the potential for significant growth in mining in the Galilee Basin, particularly around Alpha, and the potential increases in demand for housing as well as medical, dental and social services.

The Plan highlights the Queensland Government's Sustainable Resource Communities Policy, developed by DEEDI. The policy focuses on resource communities, where rapid development resulting from the resources boom has had significant impacts on community infrastructure and services, and on the social structure of local and regional communities.

The policy outlines a partnership between the state government, the Queensland Resources Council (QRC), local government and the Local Government Association of Queensland (LGAQ).

Key initiatives of the policy include:

- Coordination of responses to cumulative social impacts and regional issues through the partnership group;
- Improved planning processes to strengthen regional land use planning and infrastructure coordination; and
- Minor legislative amendments that require the establishment of social impact plans for all new mines and major mine expansions, as part of social impact assessment processes.

The agreement is aimed at strengthening links between all levels of government. It will improve the guidelines around social impact assessment that will govern all new major mines and expansions.

20.5.1.10.2 Impacts and Mitigation

As outlined under Section 20.5.1.5, Alpha has limited health and emergency services. The way it currently stands, the Project will result in increased demand, which will likely cause reduced service levels for the current population. The extent of this increased demand will be dependent on the level of population growth and the strategies adopted by the Project to manage health and emergency services for their operations. The failure of service providers to deliver required health and emergency services has been assessed as having the potential to have high impact on the community, as has the potential for sufficient funding not to be allocated to support enhanced service delivery. The potential failure of social services to achieve required service delivery has been assessed as medium. The Proponent will establish a 24-hour clinic at the Project site and will engage with emergency service providers as well as investigating options to enter into a direct contract with QAS for emergency services to reduce the Project's requirement for general service usage. Conversely if the delivery of required additional services is achieved the potential impact will be a high positive. The extent of service delivery improvement will be dependent on the level of population growth experienced in Alpha as a result of the Project.

Development of the regional council is based on agreed long-term strategies and plans. It will be critical for the Project to effectively engage with planning processes at both a regional and local level to ensure that population trends as a result of the Project will be considered in determining infrastructure, service and community development programs. The outcome of not doing this effectively could result in these plans failing to recognise population and social trends caused by the Project and therefore not adequately addressing potential social impacts. This has been assessed as high, while conversely effective engagement in these processes has been assessed as positive high.

A serious concern of BRC is the potential loss of personnel to the mining industry. This is something BRC has experienced in the past, and expect to be magnified as a result of the Project because of its proximity. The nature of employment in the mining industry will serve as a limiting factor for this, as many people who work in local government appreciate the conditions and do not want to work under the mine conditions of long hours and shift work. Further, population growth as a result of the Project may actually provide a larger pool of potential employees for BRC, negating any loss of staff.

Local government has a range of community based programs. By supporting these, the Project will maximise potential community benefits and provide targeted support to community development in the local area, a high positive impact. There is however the potential that the increased work load resulting from managing the Project will result in fatigue within the local government. This was assessed as medium.

The Proponent will consider appointing a Community Liaison Officer who will be responsible for developing open and transparent relationships with relevant bodies and ensuring the Project is effectively engaged in these processes. The identification of population trends and proactive planning as a result will be critical in supporting these processes. As discussed in Section 20.5.1.2 the SIMP will monitor population change and document strategies based on trends identified. The SIMP will also identify responsibilities of all parties in delivering funding and services to the community based on these strategies and document appropriate monitoring measures to ensure this is being performed effectively.

20.5.1.11 Primary Infrastructure and Access

20.5.1.11.1 Baseline

The following key points were identified about primary infrastructure in BRC:

- Alpha has limited electricity supply and regularly experiences blackouts and brownouts;
- Water in Alpha is sourced from a sub-artesian supply, heavily reliant on bores. Despite heavy drilling over recent years, capacity hasn't increased significantly;
- There is no sewerage system in Alpha;
- The Telstra 3G network services Alpha, however reception is limited away from the Capricorn Highway; and
- The current Alpha aerodrome is adequate for landing Dash-8 Q300 and Fokker F50 planes. BRC have proposed an upgrade that will increase the capacity of the aerodrome, making it large enough to land jets. If this proceeds, the potential aircraft capacity at the Alpha aerodrome will be greater than the Emerald airport.

Having adequate infrastructure and facilities was seen by residents as crucial to the future of the community and a core role for the BRC. People wanted to retain and maintain existing infrastructure and make key improvements based on available funding (Barcaldine Regional Council, Community Plan, 2009).

20.5.1.11.2 Impacts and Mitigation

As it currently stands, the Project is expected to result in increased road usage of the Capricorn Highway around Alpha which will result in associated safety issues relating to traffic and maintenance. This impact has been assessed medium during feasibility, very high during construction and high during operation of the Project, prior to the application of mitigation including road safety programs, routine maintenance and coordination with emergency services providers. Mitigation is anticipated to reduce the feasibility and operations impact rankings to medium; however construction is likely to remain high due to vehicle volumes and the likely size of some loads. Upgrading or maintaining this road is not a part of the Project description; however, the Proponent will support BRC efforts to obtain required funding or discuss with DTMR regarding additional road upgrades. In ongoing consultation with BRC the best route for transporting goods from Alpha to the Project site will be confirmed. Upgrading the Alpha–Clermont Road is not part of the current project description; however the Proponent will support council efforts to obtain additional funding for this. An upgrade of the Alpha–Clermont Road will be a very high positive to the community, improving safety and reducing travel times.

The SIMP will identify means for monitoring the level of Project traffic use on local roads and identify benchmarks at which specific actions will be taken.

The availability of electricity, water and sewerage in Alpha are limiting factors for population growth. Currently supplies are almost at maximum capacity and without improvement will struggle to cope with additional development. The Project is seen by many in the community as the impetus for much needed upgrades. The potential for this has been assessed as a very high positive impact. Providing this infrastructure to the community is not a part of the Project description, however the Proponent will discuss infrastructure opportunities for local economic and community development with council. The Project will introduce additional water and electricity supply to the region.

Alpha residents currently need to travel to Emerald or Barcaldine to access air services to Brisbane and beyond. An upgrade of the Alpha aerodrome has the potential to improve access by providing the opportunity for commercial airlines to service Alpha. An upgrade of the Alpha – Clermont Road (if it were to occur) would improve access from Alpha to the coast via Clermont and Mackay. The potential for improved access to Alpha has been assessed as high.

Currently residents who live away from the Capricorn Highway have poor telecommunications and rely on satellite phones. Adequate communication will be required throughout the Project site which will involve the construction of new receivers and mobile towers. This could have a high impact on the local community by providing them with improved communication. To maximise this, the Proponent will consider placing these receivers in locations where they will best benefit the community wherever possible and will support BRC to extend the benefits.

The extent of these benefits and any upgrades or improvements to services will be dependent on population growth. As discussed in Section 20.5.1.2, the SIMP will identify benchmarks and processes for closely monitoring population growth in Alpha and will document a range of strategies based on trends identified.

20.6 Conclusions

The Project has the potential to bring significant positive impacts to both the regional and local study areas. The regional study areas (IRC and CHRC) are experiencing moderate population growth (Emerald) and stability (Clermont), and are both expanding economically due to increased opportunity. The Project has the potential to prolong population and economic trends, and potentially amplify this trend in Emerald, and expand them in the Clermont area if access to the Project site is improved and transportation options examined. Manageable impacts (positive and negative) are achievable through a productive and proactive relationship between the Project and the councils through the SIMP. Inclusion of other key stakeholders including health and emergency services providers, and housing professionals/managers at key discussions should provide sufficient interaction to manage impacts. A priority will be placed on focusing on potential negative impacts experienced in other regions of Queensland including:

- Housing;
- Road safety;
- Health and emergency services; and
- Social programs targeting substance abuse, domestic violence and counselling.

The local study area (Alpha and the BRC) will also consider the management approach suggested for the regional study area. The issues in the local study area will be amplified due to the current lack of

primary and social infrastructure. This lack of infrastructure is due to the low population and geographic location of the Alpha community, as well as the other communities in the regional council. The absence of these services limits the likelihood of a significant population increase, while also ensuring that any population increase will stretch current resources. The Project has been designed to limit impacts on the community by locating the workforce in an accommodation village on the Project site, and by planning for a FIFO workforce; however, the choice to relocate is currently with the individual/family, and is therefore impossible to predict. Council is already exploring options and opportunities and the Proponent will support them in this endeavour.

It should be noted that manageable population growth is a desired outcome for all three councils.

The Project will bring water and electricity infrastructure into the region (two current shortages facing Alpha) which will enable relevant authorities (for future projects) to extend those services to the community. This will address two of the limiting factors restricting population growth in Alpha. The effects of these services extending to Alpha are not assessed in the EIS, as it is not part of the Project Description. This may need to be examined in more detail as a potential cumulative effect of the proposed projects in the basin in the future, as the implications could significantly alter the situation in Alpha.

The Proponent will establish the Hancock Consultation Committee (HCC) in the absence of a similar body to work with councils on the development and implementation of the Project SIMP (Stage 2 and Stage 3) will be the most effective platforms for managing potential impacts. The two strategies are mutually beneficial, and the HCC should be considered as a primary driver in the finalisation of the SIMP (stage 2) for the Project. The HCC will assist BRC specifically in the management of potential impacts. The Proponent will establish a Community Liaison role to assist in BRC specific impact management.