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# Red Hill Mining Lease

## Social Impact Assessment

**BHP Billiton Mitsubishi Alliance**

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Prepared for



Red Hill Project | ENVIRONMENTAL IMPACT STATEMENT

Prepared by



October 2013

*Whilst all due care has been taken in the collection and application of externally supplied data, Elliott Whiteing holds no responsibility for the accuracy of data provided by third parties.*

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## Acronyms and abbreviations

<b>ABS</b>	Australian Bureau of Statistics
<b>BCN</b>	BMA Community Network
<b>BLBP</b>	BMA Local Buying Program
<b>BMA</b>	BHP Billiton Mitsubishi Alliance
<b>BMAAV</b>	BMA Accommodation Village
<b>BPAV</b>	Buffel Park Accommodation Village
<b>BRM</b>	Broadmeadow Riverside Mine
<b>CHMP</b>	Cultural Heritage Management Plan
<b>CHPP</b>	Coal Handling and Preparation Plant
<b>CTEC</b>	Coalfields Training Excellence Centre
<b>DSDIP</b>	Department of State Development, Infrastructure and Planning (Queensland)
<b>DoC</b>	Department of Communities (Queensland)
<b>DTMR</b>	Department of Transport and Main Roads (Queensland)
<b>EDQ</b>	Economic Development Queensland
<b>EMQ</b>	Emergency Management Queensland
<b>EPCM</b>	Engineering, Procurement and Construction Management
<b>FIFO</b>	Fly-in, Fly-out
<b>FTE</b>	Full Time Equivalent
<b>GP</b>	General Practitioner
<b>GQAL</b>	Good Quality Agricultural Land
<b>GRB</b>	Goonyella Riverside and Broadmeadow
<b>GRM</b>	Goonyella Riverside Mine
<b>IAS</b>	Initial Advice Statement
<b>ICCM</b>	International council on Mining and Metals
<b>IRC</b>	Isaac Regional Council
<b>LGA</b>	Local Government Area
<b>LOM</b>	Life of Mine
<b>MDSS</b>	Moranbah and District Support Services
<b>MIA</b>	Mine Industrial Area
<b>MIW</b>	Mackay, Isaac and Whitsunday
<b>MLA</b>	Mine Lease Application issued pursuant to the <i>Mineral Resources Act 1989</i>
<b>MoU</b>	Memorandum of Understanding
<b>Mtpa</b>	Million tonnes per annum
<b>OESR</b>	Office of Economic and Statistical Research
<b>PDS</b>	Property Data Solutions

<b>QAS</b>	Queensland Ambulance Service
<b>QFRS</b>	Queensland Fire and Rescue Service
<b>QMEA</b>	Queensland Minerals and Energy Academy
<b>QPS</b>	Queensland Police Service
<b>QRSIS</b>	Queensland Regional Statistical Information System
<b>QRC</b>	Queensland Resources Council
<b>RHM</b>	Red Hill Mine
<b>RTA</b>	Residential Tenancies Authority
<b>SDPWO Act</b>	<i>State Development and Public Works Organisation Act 1971 (Queensland)</i>
<b>SEIFA</b>	Socio-Economic Index for Areas
<b>SES</b>	State Emergency Services
<b>SEWPAC</b>	Department of Sustainability, Environment, Water, Population and Communities (Commonwealth)
<b>SIA</b>	Social Impact Assessment
<b>TAFE</b>	Technical And Further Education
<b>TMP</b>	Traffic Management Plan
<b>ToR</b>	Terms of Reference
<b>UDA</b>	Urban Development Area

# 1. Introduction

## 1.1 The Proponent

BMA was formed in 2001 as a 50:50 unincorporated joint venture between BHP Billiton and Mitsubishi Corporation. The joint venture is known as the Central Queensland Coal Associates Joint Venture. BM Alliance Coal Operations Pty Ltd operates as the duly appointed constituted attorney for the Central Queensland Coal Associates Joint Venture Agreement and a Strategic Alliance Agreement dated 28 June 2001.

The operational mines are Blackwater, Broadmeadow, Goonyella Riverside, Peak Downs, Saraji, Crinum and Daunia. The Norwich Park and Gregory Open Cut Mines ceased production in May and October 2012 respectively, and remain in care and maintenance. BMA also owns and operates the Hay Point coal export terminal near Mackay. BMA's seven operational mines have a combined production capacity of up to 68 mtpa. The Caval Ridge Mine (5.5 mtpa) will be operational in 2014.

BMA supplies high quality coking coals, pulverized coal injection coals and thermal coals to domestic and international customers.

BMA is committed to the communities in which it operates. In 2012, BMA invested around \$38 million across the Bowen Basin townships to support local services and community development programs.

BMA is a significant contributor to the State and National economy, contributing an estimated \$9.3 billion in direct spending during FY13. In addition, BMA contributed approximately \$560 million in royalties, taxes and levies to the Government and invested over \$100 million in the Bowen Basin over the last two years in regional infrastructure and community partnerships.

BMA is the largest employer in the region with approximately 10,000 full time equivalent employees and contractors and plays a key role in the economic development of Central Queensland.

## 1.2 The Project

The Red Hill Mining Lease Project is located adjacent to the existing Goonyella Riverside and Broadmeadow (GRB) mine complex in the Bowen Basin, approximately 20 kilometres north of Moranbah and 135 kilometres south-west of Mackay, Queensland. The location of the Project in context with BMA's assets is shown in Figure 1.1. The Project is located in the Isaac Regional Council (IRC) Local Government Area (LGA).

The key objectives of the Project are to:

- utilise BMA owned land on the GRB Complex Mining Leases to minimise the environmental impacts from additional infrastructure and to provide project efficiencies;
- maximise resource recovery and sustain existing operations;
- operate a profitable project to provide high-quality hard coking coal to the export market; and
- design, construct and operate a project that minimises adverse impacts on the social environment; complies with all relevant statutory obligations; and continues to improve processes which enhance sound environmental management, including the social environment.

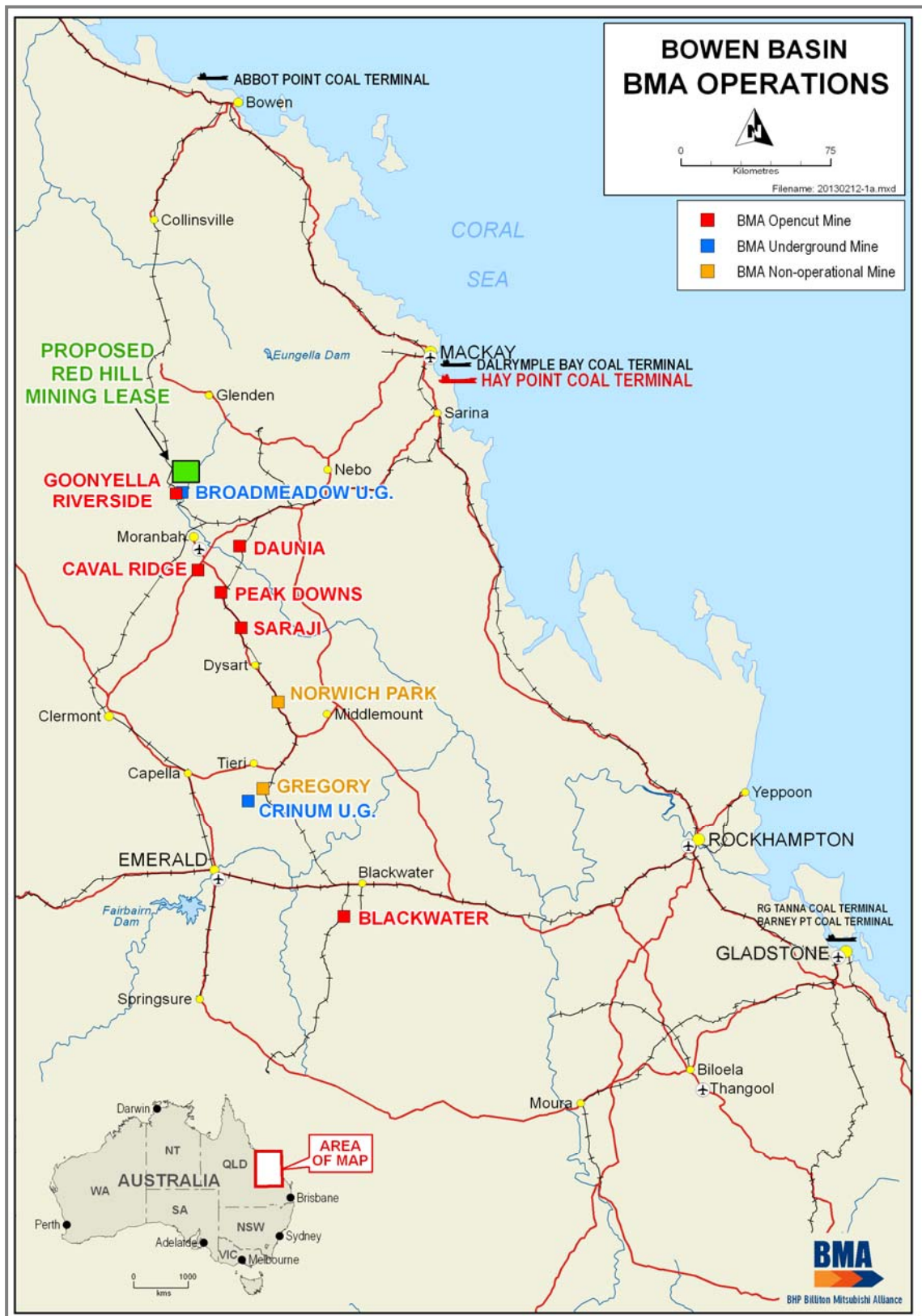


Figure 1.1 BMA Bowen Basin Operations



The Project includes the following components:

- The extension of BRM longwall panels 14, 15, and 16 into MLA70421, with key elements as follows:
  - No new mining infrastructure is proposed other than infrastructure required for drainage of incidental mine gas (IMG) to enable safe and efficient mining;
  - Management of waste and water produced from drainage of IMG will be integrated with the existing BRM waste and water management systems;
  - The mining of the BRM panel extensions is to sustain existing production rates of the BRM mine and will extend the life of mine (LOM) by approximately one year; and
  - The existing BRM workforce will complete all work associated with the extensions.
- The incremental expansion of the Goonyella Riverside Mine, with key elements as follows:
  - Underground mining associated with the RHM underground expansion option to target the Goonyella Middle Seam (GMS) on ML 1763;
  - a new mine industrial area (MIA);
  - a CHPP adjacent to the Riverside MIA on MLA 1764 and ML 1900 consisting of up to three 1,200 tonnes per hour (tph) modules;
  - construction of a drift for mine access;
  - a conveyor system linking RHM to the Red Hill CHPP;
  - associated coal handling infrastructure and stockpiles;
  - a new conveyor linking product coal stockpiles to a new rail load-out facility located on ML 1900; and
  - means for providing flood protection to the mine access and MIA, potentially requiring a levee along the west bank of the Isaac River.
- A future Red Hill Mine (RHM) underground expansion option located to the east of the GRB mine complex, to target the GMS on MLA 70421. The proposed mine layout consists of:
  - a main drive extending approximately west to east with longwall panels ranging to the north and south;
  - a network of bores and associated surface infrastructure over the underground mine footprint for mine gas pre-drainage (IMG) and management of / methane drainage to enable the safe extraction of coal;
  - a ventilation system for the underground workings;
  - a bridge across the Isaac River for all-weather access, located above the main headings, and also providing a crossing point for other mine related infrastructure including water pipelines and power supply; and
  - a new accommodation village (Red Hill Accommodation Village) for the up to 100% remote construction and operational workforces, and with capacity for up to 3,000 workers.

Figure 1.2 illustrates the location and layout of the proposed Project.

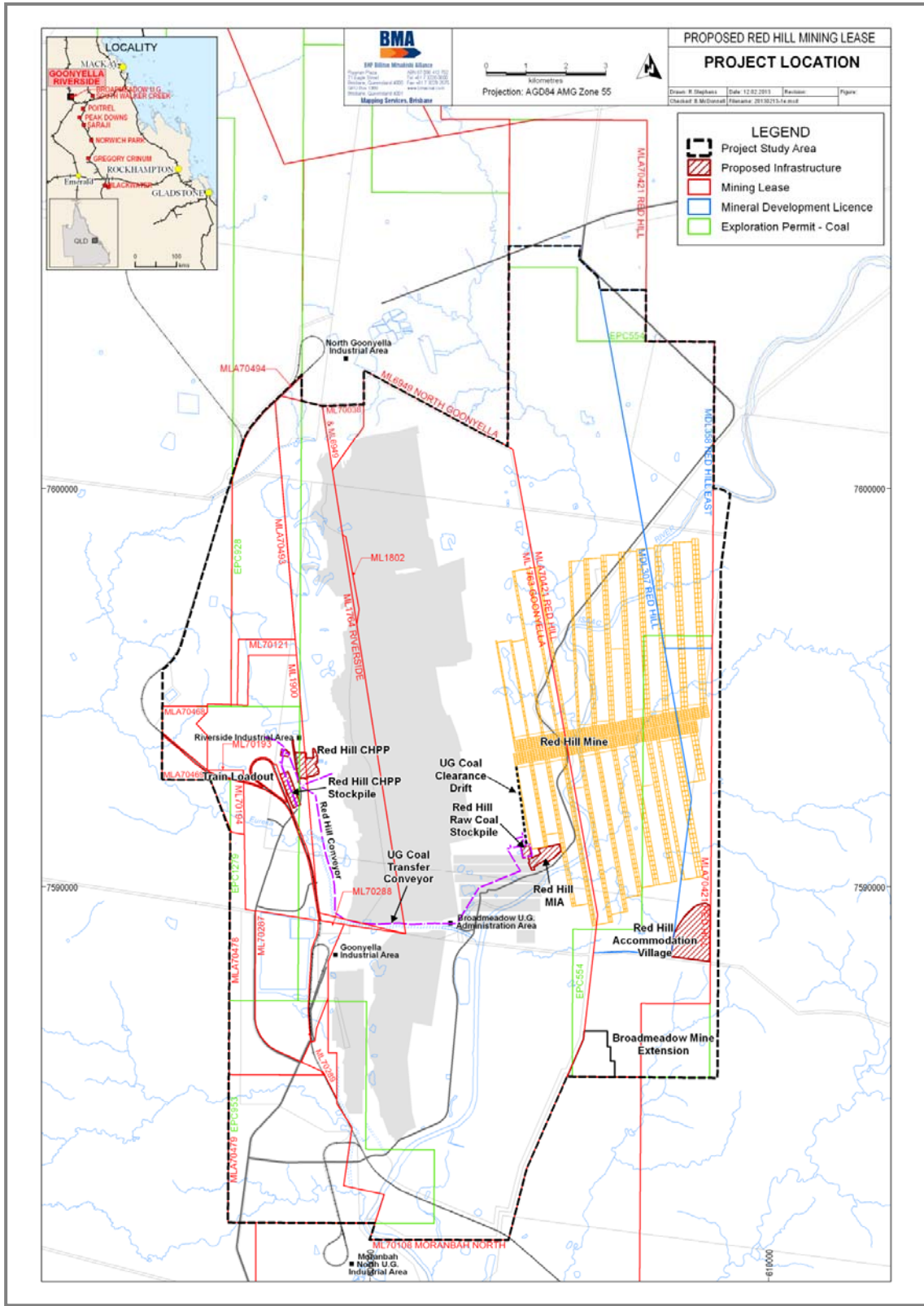


Figure 1.2 Red Hill Mine Project Location and Layout Scope for Assessment

It is anticipated that mining of Panels 14, 15 and 16 associated with the BRM will commence in Financial Year (FY) 2016. The longwall panels are extracted from the furthest mining extent, working back towards the main headings. The mining of the BRM panel extensions will utilise existing mine infrastructure and extend the Life of Mine (LoM) by approximately 1 year. No additional mining infrastructure is required to enable the extensions into MLA 70421, and the existing BRM workforce will complete all work associated with the extensions.

The potential impacts associated with the BRM panel extensions are confined to incremental surface impacts associated with mining. Apart from the extension of employment periods for existing staff which is a positive impact for population stability and income security, the BRM component is not expected to result in any social impacts or opportunities of significance to the local or regional community.

This SIA therefore focuses on the GRM incremental expansion and the RHM underground expansion option.

## **1.3 Workforce**

### **1.3.1 Construction stage**

The timing for commencement, the rate of development and scale of future production for GRM incremental expansion and RHM underground expansion option is subject to the owners' capital investment approval. For the purposes of impact assessment, a scenario has been developed which assumes the commencement of construction in 2020 and commencement of operations in 2022 for the GRM incremental expansion and RHM underground expansion option.

The GRM incremental expansion and the RHM underground expansion option have the potential to employ up to 2,000 construction employees. BMA will contract the construction of the CHPP, MIA, drift and supporting infrastructure, plant and equipment including buildings, conveyors and roads to construction contractors. The construction stage will involve site preparation, civil works, building the MIA, CHPP construction, and construction of the workforce accommodation village.

Mine construction and operation hours within GRB complex are currently 24 hours a day, seven days a week, 365 days a year. The project would maintain the same hours of operation for construction and operation.

### **1.3.2 Operation stage**

At full production, the GRM incremental expansion and the RHM expansion option have the potential to produce up to 14 million tonnes per annum (mtpa) of high quality hard coking coal over a life of 20 – 25 years. Under this scenario, the potential capacity of the extended complex (GRB and RHM) would be up to approximately 32.5mtpa during the years when GRB and RHM are both operating.

The GRM incremental expansion and the RHM underground expansion option have the potential to employ up to 1,500 operational employees. This includes 500 employees per operating long wall, approximately 450 intermittent staff to support shut-down and long wall moves, and 50 employees for the new CHPP. The estimated workforce numbers presume a Greenfield expansion option is undertaken, and do not account for potential synergies with existing operations.

The workforce is to be comprised of up to 100% remote workers. This enables a spread of employment benefits to other Queensland centres.

Workforce availability will be evaluated prior to construction, to ensure the workforce recruitment strategy avoids social impacts and maximises opportunities for social and economic benefits at local, regional and State level.

## 1.4 Accommodation

A new accommodation village, to be known as the Red Hill accommodation village (RHAV), is proposed to be located on the mining lease. The RHAV would accommodate both the construction workforce and non-local operational workers. The location of the proposed accommodation village is shown in Figure 1.2.

The ultimate capacity of the accommodation village will be determined by the rate and scale of future development sanctioned by the owners. A village with accommodation for 3,000 workers is proposed to account for a peak workforce arising out of a potential overlap between construction and operations.

A village of up to 3,000 accommodation units will require a range of management and monitoring strategies to avoid impacts on the Moranbah community and local infrastructure. These are described in Sections 5, and include:

- workforce health and support services;
- a Workforce Code of Conduct;
- an Accommodation Village Management Plan;
- engagement with community members to anticipate and avoid impacts on community values; and
- BMA's investment in community development in Moranbah and the region.

BMA will arrange air transport and/or bus transport for remote workers both during construction and operations, and all transport between site and the accommodation village. Operating with an up to 100% remote workforce will limit the number of vehicles travelling principally between Moranbah and the mine site.

A small number of the operational workforce may be required to travel by light vehicles on local roads. This will typically be restricted to supervisors and some senior and technical staff who may be allocated a vehicle.

## 2. Methodology

This SIA defines and assesses likely social impacts and opportunities, based on an understanding of:

- existing local and regional social environment;
- requirements as specified in the EIS Terms of Reference and Queensland Government policies;
- plans for location, design, staging, workforce management and project management;
- the likelihood of effects on local and regional social conditions; and
- how the proponent will work with other stakeholders to enhance social and economic vitality.

The methodology has been designed to focus on the impacts and opportunities which are of moderate to high risk, in the context of the Proponent's existing commitments and practices for mine development and management, and recognising existing local, State and industry initiatives. Key steps are detailed below.

### 2.1 Project description

The assessment is based on a detailed description of the GRM incremental expansion and the RHM expansion option, and scenarios for development. Key steps include:

- describing the location, staging, potential timing and workforce arrangements for the construction and operation scenario assessed;
- identifying potential activities which influence social conditions e.g. workforce and accommodation provisions;
- defining potential workforce demand and supply strategies; and
- identifying potential factors relevant to cumulative impacts.

### 2.2 Scoping

Scoping of impacts was undertaken, to identify the range of potential impacts, and identify impacts and opportunities which were likely to affect social conditions in the study area. Key steps included:

- definition of the study area and focus areas for assessment;
- analysis of the Terms of Reference and Social Impact Assessment Guideline;
- review of local and regional social characteristics and indicators;
- review of similar projects' impacts and opportunities;
- description of potential impacts and opportunities that would affect social conditions;
- evaluation of the risk of potential impacts occurring, given existing initiatives and commitments; and
- definition of potential cumulative impacts which require assessment.

### 2.3 Stakeholder engagement

BMA undertook extensive consultation on the Red Hill Mine Project during 2012. Stakeholder inputs have informed the baseline (Section 3) and the impact assessment (Section 4).

BMA undertakes regular consultation with Moranbah residents and community organisations, through the Moranbah BMA-Community Network (Moranbah BCN). Key issues discussed at BCN meetings during 2013 include:

- business direction and progress of BMA partnership initiatives;
- project updates on Caval Ridge Mine, Daunia Mine and the Project;
- information and feedback on BMA's communication and engagement, and impact mitigation strategies; and
- monitoring of social conditions in Moranbah including:
  - lifestyle and amenity;
  - housing access;
  - community safety; and
  - social and health infrastructure access.

BMA community relations advisers based in Moranbah are regularly engaged in a variety of community and industry forums, including the Moranbah Cumulative Impacts Group, and initiatives to address health services planning in Moranbah and Dysart. BMA's ongoing consultation activities provide a good understanding of the local and regional issues and have also informed this assessment.

Consultation activities undertaken by BMA as part of the EIS include briefings and discussions with:

- Isaac Regional Council;
- the Moranbah BCN; and
- State agencies that are planning for or providing services, community development or economic development in the Moranbah region.

## 2.4 Social Baseline

A social baseline was developed to detail existing social characteristics, conditions and indicators which may be affected by the GRM incremental expansion and the RHM expansion option, including:

- local, and State government planning context and settlement patterns, including affected properties;
- social and cultural values;
- demographic characteristics and population projections;
- health and well being;
- social infrastructure and services;
- employment and local business development;
- skills shortages; and
- housing.

The baseline section concludes with a summary of the status of existing social indicators and social conditions. This links to desired social outcomes identified in Section 5, and support monitoring of social change over time.

## 2.5 Evaluation of significant impacts

Impacts and opportunities identified as of medium or high likelihood, and of major or significant consequence, are discussed in this assessment.

The significance of potential impacts and opportunities was assessed, having regard to:

- the stages (construction or operation) in which an impact or opportunity could occur;
- existing and likely future conditions, and vulnerability to change as the result of development, including the GRM incremental expansion and the RHM expansion option; and
- the range of potential impacts identified as relevant to construction, operations or both.

The likelihood of impacts and opportunities occurring was assessed, considering:

- stakeholders' input, including their experience with previous projects;
- assessment of similar project's impacts;
- BMA strategies and specific strategies for the GRM incremental expansion and the RHM expansion option designed to avoid or mitigate impacts;
- existing Local and State Government commitments to address social impacts and maximise opportunities from mining projects;
- the consequence of the impact or opportunity, according to the SIA Guideline (see Table 2-1); and
- the potential consequences for social values and indicators.



**Table 2-1 Consequence Table – SIA Guideline**

Opportunity/Impact/Consequence				
Incidental	Minor	Significant	Major	Severe
Local, small-scale, easily reversible change on social characteristics or values of the communities of interest or communities can <u>easily adapt</u> or cope with change. Local small-scale opportunities that the community can readily pursue and capitalise on.	Short-term recoverable changes to social characteristics and values of the communities of interest, or community has <u>substantial capacity to adapt</u> and cope with change. Short-term opportunities.	Medium-term recoverable changes to social characteristics and values of the communities of interest or community has <u>some capacity to adapt</u> and cope with change. Medium term opportunities.	Long-term recoverable changes to social characteristics and values of the communities of interest, or community has <u>limited capacity to adapt</u> and cope with change. Long term opportunities.	Irreversible changes to social characteristics and values of the communities of interest or community has <u>no capacity to adapt</u> and cope with change.

## 2.6 Impacts, Opportunities and Mitigation Assessment

Following evaluation of significance in the scoping stage the assessment focussed on impacts and opportunities which were considered significant in terms of their potential effect on social conditions and community values.

Section 4 details the assessment of potentially significant impacts and opportunities. Assessment included:

- describing the links to local and State planning initiatives;
- identifying any changes to the settlement pattern including land use in the immediate Project area;
- quantitative modelling of potential effects on the size, composition and characteristics of the population;
- description of the positive and negative effects on social values, including reference to stakeholder inputs on their concerns, and assessment of data relevant to their concerns;
- describing the effect of demand for labour on local businesses and skills shortages at a State and National level;
- assessment of consequent impacts on social infrastructure, given changes to the population and provision of accommodation within the mining lease; and
- assessment of potential changes to housing demand or supply.

The assessment also addresses likely contribution to cumulative impacts, as described in Section 2.7.

Mitigation strategies are provided in Section 5 for each significant impact, and opportunities to link with Local and State initiatives are identified in respect to maximising positive social outcomes. This includes how the Proponent will work with communities, Councils, the Queensland Government and industry stakeholders to maximise social outcomes. Impacts and mitigations are summarised in Section 5, along with the social monitoring framework.



## 2.7 Cumulative impacts

Cumulative impacts are the impacts of multiple projects, which arise from the collective and compounding activities of multiple construction and/or operational activities. The number, size and location of major projects being constructed or operated in the region generally provide the basis for forecasting cumulative social impacts.

For the scenario assessed, construction is assumed to commence in 2020. Mining industry growth is likely to see fluctuations between 2013 and 2020 as has historically been the case. It is therefore difficult to define, with accuracy, the number or location of major projects whose construction or operation will coincide with this Project under the scenario assessed.

The key determinant of cumulative social impacts in the Moranbah and Isaac regional context is the number of and demographic characteristics of additional people, including non-resident workers, in the region as a result of major projects. This affects:

- population characteristics (e.g. number of non-resident workers and the total number of people in the region);
- the labour force (e.g. employment duration, opportunities and supply issues);
- housing (e.g. demand associated with the Project); and
- impacts on community values or social indicators.

As such assessment of cumulative impacts has been based on the effect of the Project's workforce on the number of residents and non-residents in the Isaac LGA during its construction and operational phases.

## 2.8 Impact Management and Monitoring

Section 5 summarises the:

- nature of significant social impacts and opportunities, and the phase in which they would occur;
- mitigation, management and enhancement strategies for each impact and opportunity;
- timing for each strategy; and
- desired social outcomes and social indicators for each issue, as the basis of adaptive management and monitoring.

Given policy, plans and local and State initiatives may have changed substantially by the time construction commences, there are some constraints in aligning BMA strategies to specific initiatives such as current State Government training programs, or changing priorities in the Isaac Community Plan post-2020. As such, BMA will consult IRC and State agencies about current initiatives prior to finalising its training and stakeholder engagement plans for construction.

This section includes a monitoring framework to evaluate mitigations, changes in social conditions and to identify emerging social impacts.

## 2.9 Assumptions and Limitations

This assessment was conducted during a period of significant change, including:

- a recent restructure of Australian Statistical Geographies, and ongoing review of ERP figures at local, State and national levels;
- application of new guidelines, policies and processes for social and environmental impact assessment in Queensland;
- a recent industry-wide contraction in mining activities; and
- significant decreases in housing prices across the Bowen Basin.

Given the economic environment, timing for delivery of the GRM incremental expansion and the RHM expansion option is not certain. For the purposes of impact assessment, a scenario has been developed which assumes the commencement of construction in 2020 and commencement of operations in 2022. As such, the assessment is based on existing conditions, population projections, and known social trends.

The assessment also assumes that:

- the GRM incremental expansion and the RHM expansion option proceeds within the timeframes assumed for the scenario assessed;
- there will be no alteration from the current project description sufficient to negatively change social conditions;
- both construction and operation workforces are engaged as an up to 100% remote workforce; and
- all visitors including contractors, subcontractors, and consultants, will stay in the purpose-built accommodation village while on site.

## 2.10 Data Sources and Notes

The document has been developed using data from:

- Australian Bureau of Statistics (ABS)
- Australian Department of Education, Employment and Workplace Relations (DEEWR)
- Department of Education, Training and Employment
- Department of State Development, Infrastructure and Planning
- Mackay Whitsunday Regional Economic Development Corporation
- Queensland Health
- Queensland Treasury's Office of Economic and Statistical Research (OESR)
- Isaac Regional Council
- Residential Tenancies Authority and PDS live data;
- Skills Queensland
- technical studies prepared as part of the Project EIS
- legislation, planning policies and guidelines as detailed in **Section 3.1**
- websites and other documentation representing key stakeholder interests and industry sectors.

The ABS replaced its Australian Standard Geographical Classification (ASGC) with the new ASGS in July 2011. Geographical changes have been made in the ASGS Main Structure (creating Statistical Area Levels 1 – 4) and the Greater Capital City Statistical Areas (GCCSA). For the 2011 Census release, data has also been made available by SLA. To maintain trend analysis with 2006 Census results, the SIA is based on the previous ABS Australian Statistical Geography Classification (ASGC) for state suburb and local government area data.

While this baseline refers to historical population data using the ABS ASGC, population projections and business registration data provided by OESR are based on the new statistical geography standard, including:

- Moranbah Statistical Area Level 2;
- Bowen Basin – North Statistical Area Level 3 (encompassing SA2s of Bowen, Broadsound-Nebo, Clermont, Collinsville and Moranbah); and
- Mackay Statistical Area 4 (encompassing SA3s of Bowen Basin – North, Mackay and Whitsunday).

Table 2.2 presents a summary of ABS source data referred to in the demographic baseline.

**Table 2-2 demographic baseline source data, 2006-2011 ABS Census**

2006	2011
Moranbah (Belyando Shire) (SSC36793)	Moranbah (SSC31100)
Belyando (S) (LGA30600) Broadsound (S) (LGA 31700) Nebo (S) (LGA 35700)	Isaac (R) (LGA33980)
Mackay (Statistical Division) (340)	Mackay (R) (LGA34770) Isaac (R) (LGA33980) Whitsunday (R) (LGA37340)
Queensland (STE 3)	Queensland (STE 3)

Data-related limitations were inherent in the production of this social impact assessment as noted where relevant in Section 2.2.

### 2.11 Study area and stakeholders

The Project is located adjacent to the existing GRB mine complex in the Bowen Basin, approximately 20 kilometres north of Moranbah and 135 kilometres south-west of Mackay, Queensland. The Project is located in the Isaac Regional Council (IRC) LGA.

The study area for the SIA therefore includes the Moranbah State Suburb (as defined by the ABS) and the IRC LGA. The GRM incremental expansion and the RHM expansion option will also be relevant to the Mackay, Isaac and Whitsunday (MIW) Region, so baseline and assessment data are provided for the MIW region where relevant..

Stakeholders in this study area include:

- directly affected land holders and potentially affected neighbouring land holders;
- community members, businesses and organisations in Moranbah;
- IRC; and
- local, regional and state agencies and organisations that plan for or service the MIW region.

## 2.12 Terms of Reference

Terms of Reference (ToR) for the Environmental Impact Statement were finalised in September 2013. A summary is provided in Table 2.3.

**Table 2-3 Social ToR**

ToR Section
<b>6. Social values</b>
Conduct a social impact assessment (SIA) in consultation with the Coordinated Project Delivery Division in the office of the Coordinator-General.
<p>The construction and operation should aim to meet the following objectives:</p> <ul style="list-style-type: none"> <li>▪ avoid or mitigate adverse social and economic impacts</li> <li>▪ capitalise on social and economic opportunities potentially available to affected communities</li> </ul>
<p>In accordance with the Coordinator-General's Social Impact Assessment guideline, describe the likely social impacts (positive and negative) on affected communities taking into account proposed mitigation measures. The SIA should provide:</p> <ul style="list-style-type: none"> <li>▪ a definition of the stakeholders and impacted communities of interest</li> <li>▪ a social baseline study of the impacted communities of interest</li> <li>▪ an overview of State Government legislation and policies</li> <li>▪ an explanation of methods used to gather information</li> <li>▪ identification of potential direct social impacts and prediction of the significance of any impacts</li> <li>▪ the proponent's proposed enhancement and mitigation measures</li> <li>▪ the proponent's monitoring framework that informs stakeholders on the progress of the enhancement and mitigation measures</li> </ul>
<p>Components to be considered as part of an SIA include:</p> <ul style="list-style-type: none"> <li>▪ community and stakeholder engagement</li> <li>▪ workforce management</li> <li>▪ housing and accommodation</li> <li>▪ local business and industry content</li> <li>▪ health and community wellbeing</li> </ul>
<b>6.1 Description of existing social values</b>
<p>A social baseline study should be compiled from qualitative and quantitative data that has been compared, aligned and analysed using appropriate social science research methods. Broad data categories may include:</p> <ul style="list-style-type: none"> <li>▪ community history and culture</li> <li>▪ population</li> <li>▪ workforce participation, employment and diversity profile</li> <li>▪ housing and accommodation</li> <li>▪ education and training</li> <li>▪ business, industry and economy</li> <li>▪ income and cost of living</li> <li>▪ social infrastructure</li> <li>▪ technology</li> </ul>

## ToR Section

- community health and safety
- transportation and access
- other including socio-economic advantage and resilience, relevant economic modelling and cumulative impact data

Data should be supported by recent on-the-ground research.

### 6.2 Potential impact and mitigations

Assess and describe the type, level and significance of social impacts, benefits and opportunities on the local area, based on outcomes of community engagement processes and the social baseline study. This should include sufficient data to enable affected local and state authorities to make informed decisions about the effects of Project activities.

Social impact mitigation strategies and measures must include:

- the impacts documented in the SIA
- description of the mitigation and management strategies
- outcomes, performance indicators and targets
- significant stakeholders
- timing/timeframes
- monitoring framework

The assessment should identify opportunities to mitigate negative impacts and capture the local and regional benefits, including:

- strategies for ensuring local suppliers of goods and services receive full, fair and reasonable opportunity to tender for work throughout the life of the mine through adopting policies such as the Queensland Resources and Energy Sector Code of Practice for Local Content
- employment strategies for local residents including members of Indigenous communities and people with a disability
- any recruitment and training programs to be offered

In determining appropriate mitigation measures, proponents will consider whether the social opportunities and impacts are accurately, reasonably and reliably able to be attributable to:

- the GRM incremental expansion and the RHM expansion option
- a cumulative impact where the proportion of the impact can be readily and reasonably forecast and/or separated from the total cumulative impact or opportunity
- an existing issue, legacy or cumulative impact which is not attributable

Impact mitigation measures are required in the first two instances only

#### 6.2.1 Cumulative impacts

- Evaluate and discuss the potential cumulative social impacts including an estimation of the overall size, significance and likelihood of those impacts
- Cumulative impacts, in this context, is defined as the additional impacts on population, workforce, accommodation, housing, and use of community infrastructure and services, and other proposals for development projects in the area, which are publicly known or communicated by the Office of the Coordinator-General, if they overlap the same timeframe as its construction period
- Discuss the concept of longitudinal cumulative impacts, or 'project fatigue', where the community in the study area has been subject to a number of large-scale construction projects in recent years

## 2.13 Stakeholder inputs

The scope of assessment has been guided by the results of consultation with stakeholders in the Moranbah area and related regions.

BMA undertook extensive consultation in the Moranbah and MIW region during 2011-12, in regards to a number of growth projects then proposed. This included specific consultation as part of assessing potential for development of the Project. A list of people and organisations consulted is provided in Appendix A.

Given cyclical changes in resource development and a number of other factors, the findings of 2011/12 consultation were tested for relevancy and validity in this SIA process. The results of this are described in the relevant sub-sections of Section 4.

Key findings of BMA's consultation in 2011/12 and where they are considered in the assessment are shown in Table 2.4.

**Table 2-4 Stakeholder Inputs BMA 2011/12 Consultation**

Issue	Stakeholder input	SIA Section
<b>Housing and/or accommodation affordability</b>	Housing costs were discouraging families from settling, and making it difficult for businesses and services to attract and retain workers. (This is likely to have changed with the recent decrease in rental prices). Stakeholders were concerned that the lack of affordable housing leads to overcrowded, communal homes which impact community safety. This was not attributed directly to BMA but is part of the cumulative context.	Section 3.6 Section 4.9
	The growth of mining in Bowen Basin had increased demand for rental and permanent accommodation for mine workers in the region, reducing the availability of accommodation for families and permanent residents.	Section 3.6 Section 4.9
<b>Remote workforce arrangements</b>	Remote workers increase draw down on already at-capacity health and emergency services, at a local and regional level.	Section 4.2.2
	Community cohesion and perception of community safety are declining with the increase in non-resident workers.	Section 4.4
	Some stakeholders recognised the need for remote workers to fulfil long-term growth plans.	
<b>Attracting and retaining employees</b>	Health and emergency services and local business representatives said they were experiencing difficulty in attracting and retaining employees in Moranbah. Barriers identified were the inability to compete with high wages offered by mining companies, affordable housing availability and the cost of living in the region.	Section 4.7 Section 4.2.2
<b>Accommodation villages</b>	Most stakeholders felt the use of workforce accommodation villages for all staff and contractors helps to decrease housing stress in Moranbah, however some stakeholders raised concerns about village locations and management, and the potential increase in demand on local health and emergency services.	Section 1.4 Section 4.2 Section 4.6
<b>Health and emergency services</b>	Stakeholders identified that health and emergency services in Moranbah and the greater Isaac and Mackay regions were already under pressure. This was due to services responding to the needs of a larger population base than they were resourced for. As such they were concerned the increased remote workforce could aggravate the problem.	Section 4.6 Section 4.8

Issue	Stakeholder input	SIA Section
<b>Community values</b>	Some stakeholders believed the growing use of remote workforces would lead to a decreased feeling of community in Moranbah, prompting residents to leave the region. These concerns were based on a perception that non-resident workers may not have the same respect for Moranbah and the region as locals do, and that remote workforces may negatively affect local participation in activities such as volunteerism and sport.	Section 4.3 Section 4.4
<b>Workforce behaviour</b>	Some stakeholders had negative experiences with non-resident workers misbehaving in public places and/or showing disrespect to local staff. Stakeholders suggested enforcement of behaviour standards and induction processes needed to be implemented by the owners to manage the potential for such incidents.	Section 4.3 Section 4.6
<b>Community safety</b>	Some stakeholders felt the increasing number of non-resident workers in Moranbah negatively impacts the 'family feel' of the township, including community perceptions of safety and security. Others felt remote workforces were, or were perceived to be, attributing to an increase in alcohol and drug incidents in the community.	Section 4.5 Section 4.6
<b>Dissatisfaction with government investment level</b>	Some stakeholders voiced dissatisfaction with various levels of government and their delivery of social infrastructure and services to Moranbah. They also said there was a misconception in government that the majority of people residing in the Moranbah region were earning high wages, and therefore not requiring resourcing and / or funding for various social services	Section 3.5

Key issues identified in BMA's recent regular consultation include:

- development of more diverse and affordable housing;
- increasing the capacity of Moranbah's medical services; and
- improving environmental outcomes in Moranbah, such as air quality.

Stakeholder inputs have been considered throughout the assessment.



## 3. Social Baseline

This chapter provides the baseline for social impact assessment, by documenting the social environment, social conditions and local and regional values. It includes:

- Planning context, including local, State government and industry initiatives;
- Settlement pattern and social land uses;
- Community values and history;
- Demographic characteristics and projections;
- Community health and wellbeing;
- Social Infrastructure; and
- Housing and Accommodation.

### 3.1 State and Local Planning Framework

#### 3.1.1 *State Development and Public Works Organisation Act 1971*

BMA submitted an Initial Advice Statement to the Coordinator-General in May 2013, requesting its designation as a Coordinated Project under the *State Development and Public Works Organisation Act 1971*. The designation was received in June 2013, along with draft Terms of Reference (TOR) for an EIS. The TOR were finalised following public display and consideration for submissions during September 2013. The SIA has been prepared in compliance with the TOR, as described in Section 2.12.

#### 3.1.2 **Regional and Resource Towns Action Plan**

The Regional and Resource Towns Action Plan has been prepared by the Department of State Development, Infrastructure and Planning (DSDIP) to identify short-term initiatives and 'on the ground' projects which can be underway in the next 12 to 24 months and respond to localised issues such as the effects of the recent mining boom on communities.

As part of the Action Plan, DSDIP will assist Isaac Regional Council to prepare the region's draft planning scheme for public notification in 2013. In Moranbah, Economic Development Queensland (EDQ) will partner with Council to:

- facilitate development of the Belyando Estate;
- investigate the preparation of a development plan for the unused portion of the Moranbah golf course for residential development; and
- prepare concept plans and assess the feasibility of Town Centre Rejuvenation projects.

These short-term initiatives will be delivered to complement a range of planning reforms underway by the Queensland Government. The Department will also consider Royalties for Regions business cases for a Dysart Medical Centre and Q10 Bridge to mitigate flood risk for the Belyando Estate in Moranbah.

#### 3.1.3 **Social impact assessment: Guideline July 2013**

The Queensland Government's Social Impact Assessment Guideline provides direction for proponents to undertake a streamlined, risk-based approach to social impact assessment. The guideline represents a



shift in focus from prescriptive action-based conditions, to preference an outcomes-focused mitigation and monitoring framework.

The guideline also emphasises the value of building long-term relationships between proponents, stakeholders and communities of interest who are directly affected. It also aims to clarify the roles of key stakeholders in the development and implementation of a SIA.

The guideline complements the Queensland Government's regional development policy *Towards better community impact management for resource regions July 2013*. It recognises the benefits and mitigations addressed under the State's planning and policy framework, and through current Industry codes and tools.

### 3.1.4 Education, Training and Employment Policies

The Queensland Government has two key initiatives which will improve the skills and availability of Queensland workers, as described below. The initiatives are aimed at strengthening work readiness and trade skills. BMA supports the Coalfields Training Excellence Centre in Moranbah, which will complement these initiatives.

#### **Great skills. Real opportunities**

The Queensland Government's action plan 'Great skills. Real Opportunities' for further education and training sector reform will support Queenslanders to access and complete skills training. The reforms include:

- offering free training for every Year 12 graduate to enrol in high priority qualifications through preferred training providers within a year of leaving school;
- access to government subsidised training placements;
- government funding to selected high quality providers to deliver priority certificate III level qualifications;
- delivery of foundation skills including language, literacy and numeracy and other workplace preparation skills;
- additional support for Queenslanders with diverse needs to gain a qualification through a new Community Learning Program;
- establishing a Ministerial Industry Commission partnership between industry, employers and government to ensure that training investment matches skill needs;
- an additional \$86 million investment over six years for an extra 10,000 apprentice and trainee commencements; and
- reforming TAFE Queensland to ensure it is competitive, responsive, innovative and flexible.

#### **Solid partners Solid futures**

BMA is working closely with government through the QRC to increase Indigenous participation in the work force through the Solid Partners Solid Futures initiative and the Bowen Basin MOU.

The Queensland Government's *Solid partners Solid futures* Plan 2013-16 calls for a partnership approach, administered through the Queensland Indigenous Education Consultative Committee, to improve early childhood, education and employment outcomes for Aboriginal and Torres Strait Islander children and young people at four critical phases:

- ensuring children from 0 – 8 years of age make successful transitions from home to early childhood education and care and school;
- ensuring school students are enrolled, engaged and achieving in school; and progressing at the same rate as non-Indigenous students;
- ensuring Aboriginal and Torres Strait Islander students make a successful transition from school to training, further study or into employment; and
- ensuring Aboriginal and Torres Strait Islander young people make a successful transition from training or further study into employment.

## **Women in Resources Strategy**

The Women in Resources Strategy, aimed at increasing female participation in the resources sector, includes funding of \$100,000 annually over three years for the Queensland Resources Council (QRC) to deliver two key initiatives - Women in Mining and Resources Queensland and Queensland Minerals and Energy Academy's Gateway Schools Program. In 2011, the QRC Board reset its target to increase female participation in the resources sector to 20% by 2020.

BMA participates in these strategies with the QRC and QMEA.

### **3.1.5 Mackay Isaac and Whitsunday Regional Plan 2012**

The MIW Regional Plan 2012 (DLGP 2012) provides the strategic framework to guide future planning and development in the MIW Region. The purpose of the plan is to 'manage regional growth and change in the most sustainable way to protect and enhance quality of life in the region' (DLGP 2012, p.4).

Moranbah is identified as the main service centre for the Isaac sub-region in the MIW Regional Plan. The Regional Plan notes that, with an anticipated high level of growth, Moranbah will continue to be the main service centre but will change in scale and composition over time.

A key challenge for the future, identified in the Plan, is the importance of retaining a significant proportion of mining workers as permanent residents in Moranbah in order to develop and maintain a sense of community. There is also some consideration given to the need to diversify the economy of the area to encourage resilience during economic down turns. Other challenges noted include the provision of affordable accommodation and the need to supply sufficient services and infrastructure in order to meet growing community needs.

As described further in Chapter 1 of the EIS, the GRM incremental expansion and the RHM expansion option is using land within or in proximity to the existing GRM complex and infrastructure will be co-located with other infrastructure corridors including road, power, water and rail. Co-locating infrastructure reduces the need for new infrastructure sites and corridors, and thereby will reduce overall costs to the community.

The GRM incremental expansion and the RHM expansion option will also contribute to providing significant economic and diversified employment opportunities for the MIW Region and will manage the impact of new workers to the region through appropriate accommodation strategies. The activities are therefore considered to be consistent with the vision of the Regional Plan.

### 3.1.6 Isaac Region 2020 Vision

In 2009, the IRC developed a Community Plan called the Isaac Region 2020 Vision (IRC 2009) to establish long-term planning goals and objectives for the region that could be validated by the community through community engagement and feedback.

The plan's objectives are cast primarily at the regional LGA level, and detail the Vision for diverse lifestyles, IRC's environment', the regional economy', and essential services for towns in IRC.

Objectives of particular relevance to Moranbah relate to the pressures and issues arising from the rapid and continuing growth in the resource and mining industries in the region. Considerations within the Community Plan include stresses on housing availability and affordability, social infrastructure and service provision including health, wellbeing, community and cultural activities, and diversifying the economy to be less reliant on mineral development.

The Community Plan includes regional goals and aspirations for sub-regions of the IRC LGA. The goals and aspirations of the Community Plan establish a social context that seeks to support economic and regional development within the Isaac Region. For Moranbah, examples include town beautification, upgrading sporting facilities including the Moranbah Aquatic Centre, implementing initiatives to diversify the economy and attract outside business investors, upgrading the Moranbah Youth Centre to assist in managing youth issues, and requests for greater support in addressing cumulative impacts on the community from the mining industry.

BMA has addressed several of Moranbah's priorities by co-funding an upgrade to the Aquatic Centre and the development of a Youth and Community Centre, developing its Local Buying program, and supporting assessment and planning of health service models in the Moranbah region.

Growth and the consequent pressures on housing and other social resources have decreased since 2008-09, however the cyclical nature of mining growth means an upturn in growth will occur sometime in the next few years, and this assessment holds the sustainability of social resources as a guiding principle.

## 3.2 Settlement Patterns

This section of the SIA focuses on:

- land owners and employees on nearby properties, and any changes to their social and economic conditions;
- land use in the immediate Project study area, and any potential effects on social and cultural uses of land; and
- the local and regional land use context for Moranbah, IRC LGA and the MIW region.

Local and regional land uses, statutory planning requirements and environmental approvals for land use are discussed in other EIS chapters.

### 3.2.1 Properties near the Project site

Land uses within a five kilometre radius of the EIs study area include mining and grazing. The areas not subject to mining leases are zoned 'Rural Use'. The surrounding properties used for grazing include homesteads and rural residences. Field investigations undertaken by BMA in 2011 confirm the Project area and immediate surrounds do not include sensitive land uses such as for community infrastructure, forestry, fishing or recreational activity.

The Moranbah-Glenden stock-route (U831) is a registered, but unused route along Red Hill road (see Figure 3.1). There may however be informal stock routes in use by individual land owners. The Project's implications on informal stock movement patterns will be identified during BMA's land owner negotiations, where appropriate mitigation measures will be agreed.

Land owners that are considered as part of this assessment include those:

- directly affected<sup>1</sup> (that is, properties not owned by the Project, upon which mine construction, operational or infrastructure areas would be situated); and
- indirectly affected (where use of their properties or the local area may be affected through proximity to Project traffic routes, accommodation villages, construction sites or infrastructure operations).

There is currently one land owner directly affected by the Project at two different property locations. Affected and adjacent properties are listed in Table 3.1.

**Table 3-1 Affected and Adjacent Properties**

Category	Name	Location	Land Use
<b>Directly affected properties</b>	Riverside Homestead	north-eastern portion of the site	Privately owned - subject to compensation agreement Grazing
	Broadmeadow Homestead, Cottage 1 and 2	south-south-west portion of the site	Privately owned - Subject to compensation agreement Grazing
<b>Properties within 10 km</b>	Red Hill Homestead	Less than ~ 1km east of the site	Owned by BMA
	Lapunyah Homestead	~1.5 km west of the site	Owned by BHP Billiton Mitsui (BMC)
	Burton Downs Homestead	~ 5km north-east of the site	Owned by BMA
	Denham Park Homestead	~ 7 km north-north-west of the site	Owned by BMC
	Picardy Homestead	~ 10 km west of the site	Privately owned

The potential for impacts on land owners or property employees in the immediate area and mitigations is discussed in Section 5.3.

<sup>1</sup> affected - groups or persons with rights or interests in land, as defined under section 38 of the EP Act, or water as defined under the Water Act 2000 (Qld)

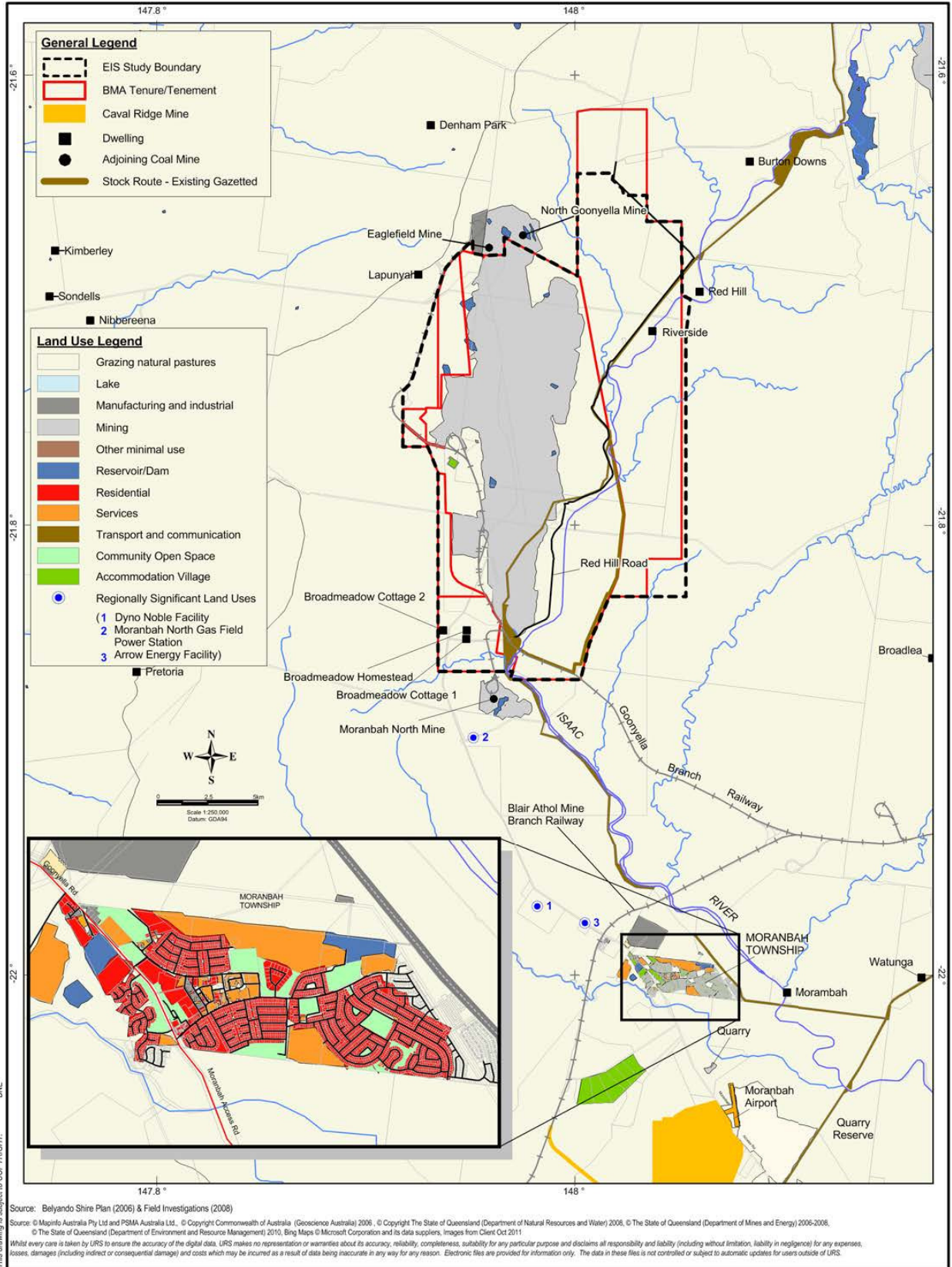


Figure 3.1 Red Hill Mine Project Location and Land Uses



### 3.2.2 Moranbah

The town of Moranbah is located approximately 20 kilometres south of the Project. Moranbah was established as a purpose-built mining town by Utah Development Company in the late 1960s, initially servicing Goonyella followed by Peak Downs Mine. Moranbah is 135 kilometres southwest of Mackay the regional coastal centre.

Moranbah is a residential town constructed from the late 1960's with land uses including:

- primarily low density detached dwellings, with a recent increase in medium density housing options;
- a town/civic centre comprising main street shopping, a library and gallery, Council offices and civic centre;
- a large range of sporting and recreational facilities;
- three schools, a hospital and a Mining industry training centre;
- an airport to the east of town;
- shopping and service areas in the centre of town; and
- light industrial areas on the western town fringe.

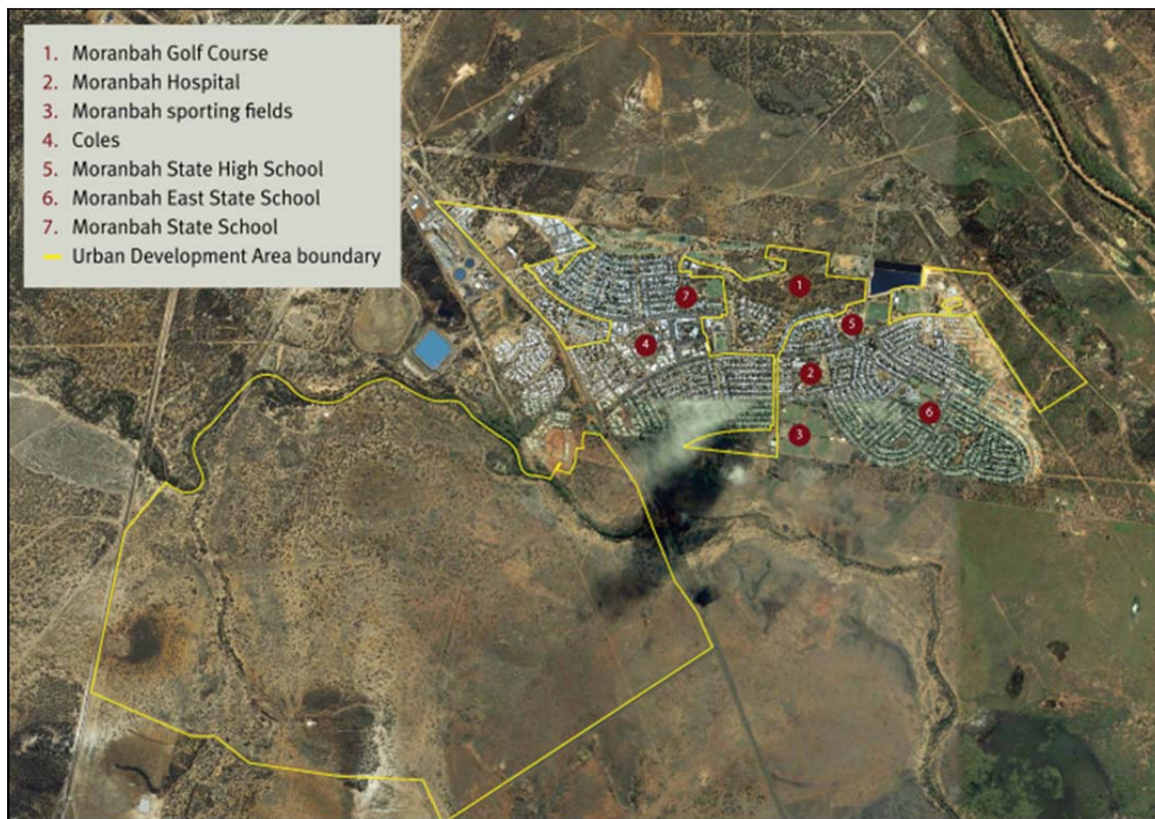
Several accommodation facilities are also located in the Moranbah area, including:

- Moranbah Accommodation Centre;
- Curtin House (owned by BMA);
- Grosvenor Village Accommodation;
- The MAC Moranbah Accommodation Village;
- Moranbah Smart Stays Village;
- Eureka Accommodation Village;
- BMA Accommodation Village (BMAAV), 5km east of Moranbah; and
- Buffel Park Accommodation Village (BPAV), 16km east of Moranbah.

In response to a lack of affordable housing in Moranbah, an area of 1,218 ha within Moranbah was declared an Urban Development Area by the Queensland Government on 30 July 2011. The vision for the Moranbah UDA aligned with the MIW Regional Plan's direction to 'encourage development of a wider and more affordable choice in housing styles in Moranbah'. The Moranbah UDA aims to deliver land to the market quickly and deliver a diversity of housing, to address housing pressures associated with the resource industry growth (ULDA 2011a).

To date, a total of 151 properties have been released to the market in the UDA's Bushlark Grove development (DSDIP, 2012), with land and housing packages for units starting at \$298 000 and packages for houses starting at \$400,000<sup>2</sup>. Figure 3.2 provides an overview of the Moranbah UDA.

<sup>2</sup> Viewed 28 May 2013 at <http://www.bushlarkgrove.com.au/?name=House-and-land-packages><sup>3</sup> Users of these population data should be aware that in July 2012 the ABS released preliminary Census rebased ERPs for the years 2007 to 2011. These ERPs, which will not be finalised until August 2013, differ substantially from previous estimates for all LGAs and most localities in the Bowen Basin. As a result, the ERP components of FTE population data from previous editions of the Bowen Basin Report are not directly comparable to those in Table 3. See <http://www.oesr.qld.gov.au/products/tables/index.php> for further information.



**Figure 3.2 Moranbah UDA map**

Source: ULDA 2011

On 1 February 2013, the Economic Development Act 2012 (ED Act) came into effect, and Economic Development Queensland (EDQ) was established to help drive the Government’s economic development agenda by facilitating and fast-tracking residential, urban and industrial development throughout Queensland. EDQ replaces the Urban Land Development Authority (ULDA) and the land ownership, development roles and resources of the ULDA have been transferred to EDQ. Bushlark Grove is a new residential development project, located in central Moranbah being implemented by the EDQ.

Other land uses in the Moranbah area and Isaac region include grazing, mostly for cattle, but there are also small stocks of goats and sheep grazing in the area. Much of the region’s landscape has been cleared previously, either as a result of mining activity, grazing, bush fire or settlement. Regrowth is evident in many areas, particularly where grazing pursuits have been limited or restricted and these areas include corridors of remnant vegetation along waterways.

Moranbah is connected to the Peak Downs Highway by the Moranbah Access Road. The Project would be accessed by Goonyella Road. Both are two-lane bitumen roads, heavily trafficked and in poor conditions in places. The Peak Downs Highway is also heavily trafficked and considered a high priority for upgrading.

There is a direct air service from Brisbane to Moranbah Airport currently operating several return flights per day, and frequent flights between Brisbane and nearby regional centres such as Mackay. A private taxi service is available in Moranbah town limits.

There is little public transport in Moranbah, increasing reliance on private vehicle usage. There is no direct passenger train service to Moranbah. A daily bus service operates between Mackay and Moranbah, and Emerald and Moranbah and there is a twice-weekly bus service to Rockhampton

available. The majority of bus services operating in and around Moranbah are arrangements for commuting workers.

There are also two school bus routes (P1348 and S359) which utilise Peak Downs Highway to provide transport to the schools in Moranbah from Clermont and Coppabella.

### 3.2.3 Isaac Regional Council Local Government Area

IRC was formed in 2008 with the amalgamation of Belyando, Broadsound and Nebo Shire Councils. The LGA encompasses 58,862 km<sup>2</sup> and at the 2011 Census had a population of 22,588. The Isaac LGA is made up of a diverse mix of coastal, agricultural and mining communities. It contains a substantial portion of the Bowen Basin coal reserve which has supported intensive mining operations in the region for the past forty years.

Moranbah is the Isaac region's major urban centre and one of the main mining towns in the Bowen Basin. Other towns in the Isaac region include Clermont, Coppabella, Dysart, Glenden, Middlemount, Nebo and St Lawrence. Smaller communities are located in Carmila, Clairview, Clarke Creek, Greenhill, Ilbilbie, Kilcummin, Mackenzie River, Mistake Creek and Valkyrie. Direct impacts or benefits are not expected to result for towns within the Isaac LGA, with the exception of Moranbah.

Two major state roads service the Isaac LGA. These include:

- Peak Downs Highway (connecting Clermont to Mackay), located approximately 8 kilometres south of Moranbah, Isaac Region; and
- Suttor Developmental Road (connecting Mount Coolon to the Peak Downs Highway, Nebo), located approximately 20 kilometres south west of Glenden, Isaac Region.

Airports are located at Moranbah and Clermont.

### 3.2.4 Mackay, Isaac and Whitsunday Region

The MIW region includes the combined LGAs of Mackay, Isaac and Whitsunday Regional Councils. The MIW Region includes much of the mining and resource development in the Bowen Basin, and includes communities which provide housing, businesses, recreational, community and other resources for the mining industry and its workforce.

Together, the MIW Region includes eight former LGAs within MIW as shown in Table 3.2.



**Table 3-2 Region Council areas within the MIW Region**

<b>Current amalgamated regional council area</b>	<b>Former local government area</b>
<b>Mackay Regional Council</b>	Mackay City Council Mirani Shire Sarina Shire
<b>Whitsunday Regional Council</b>	Whitsunday Shire Bowen Shire
<b>Isaac Regional Council</b>	Broadsound Shire Belyando Shire Nebo Shire

Over 90% of land in the Mackay Isaac Whitsunday Region, comprising an area of approximately 8.3 million hectares is zoned for rural purposes under its local government planning schemes. Sugarcane production dominates the region's rural land use, particularly along the coast. Cattle grazing, agriculture and horticulture are also major rural land use activities in the region (MIW Regional Plan 2012).

The Mackay City Centre is the principal service and activity centre for the MIW region, providing high order administrative, business, commercial, cultural, entertainment, and shopping services. Mackay features a university campus, base hospital and the region's main air and sea ports (MIW Regional Plan 2011).

As a regional centre, Mackay also offers significant housing density and diversity to meet the varied needs of residents and visitors (Queensland Government 2011; Mackay Regional Council 2011). These are attractive features for families associated with activities in the Bowen Basin, although the existing demand for housing creates a risk of limited availability. There are three major state roads within the MIW with potential to service the Project area. These include:

- Peak Downs Highway (connecting Clermont to Mackay), located approximately 4 kilometres south of Moranbah Airport, in the Isaac Region;
- Suttor Developmental Road (connecting Mount Coolon to the Peak Downs Highway, Nebo), located approximately 20 kilometres south west of Glenden, in the Isaac Region; and
- Bruce Highway (connecting Brisbane to Cairns), intersecting Mackay.

### 3.3 Social and Cultural Values

#### 3.3.1 Indigenous values

Aboriginal people have inhabited the Moranbah and Isaac region for many thousands of years. More recently, Aboriginal people were displaced and dispossessed of traditional lands in the area during the 1860's as pastoralism took hold, with extensive cattle grazing properties being developed during the late 19<sup>th</sup> and early 20<sup>th</sup> centuries. Aboriginal people have maintained connections with many parts of the region not alienated by other titles.

The Barada Barna People and Wiri Core People traditional owner groups have interests in land in the region.

The Wiri Core People have a registered claim for the recognition of native title rights and interests over 5735.57 km<sup>2</sup> in central Queensland.

Key issues raised by traditional owner groups within the study area have related to:

- business development, training and employment opportunities with mining and ancillary service industries in the Bowen Basin; and
- potential for erosion and subsidence of land to impact on native flora and fauna, which are traditional food sources, and on places of cultural heritage.

BMA strategies focussed on Indigenous engagement in economic development and employment are outlined in Sections 4.2 and 4.7. Cultural heritage issues are addressed in Section O of the Red Hill Mining Lease EIS.

### 3.3.2 Land owner values

A significant proportion of land in private land ownership across the Moranbah and Isaac region has been for longstanding pastoral and rural uses. As described in Section 4.3, much of the region's landscape has been cleared previously, either as a result of pastoral and agricultural activity, bush fire or settlement.

Private property owners hold social values including:

- homes and temporary workers' accommodation;
- businesses (principally grazing) and livelihoods;
- family heritage (potentially including burials and memorials);
- registered cultural heritage; and
- family recreation and quiet enjoyment of property.

Mining activity has also existed in this region for more than 40 years, and land owners are familiar with the impacts and benefits associated with the industry.

### 3.3.3 Moranbah

#### 3.3.3.1 History

The Moranbah area was originally settled by pastoralists in the mid-1800s. Moranbah township was purpose-built by Utah Development Company in the 1960s, initially to service Goonyella Mine and then Peak Downs Mine.

Moranbah has experienced the cyclic impacts of the coal industry with corresponding fluctuations in the economic prosperity and population of the town. Moranbah's population and housing demand declined from the mid-1990s until 2002 the town experienced rapid growth associated with the expansion of Queensland's coal market (Haslam McKenzie et al. 2009).

Rising demand for coal resources has consequently resulted in substantial investment in extractive operations and supporting processing infrastructure around the local and regional area (Franks et al. 2008). A more detailed account of Moranbah's history is contained in the Cultural Heritage section of the EIS.

#### 3.3.3.2 Values

Moranbah is a family-orientated community, described by local stakeholders as 'a great place to raise kids' (BMA, 2012). However, some local stakeholders consulted by BMA in 2012 also expressed their

view that the introduction of longer shifts and rotating rosters to the mining industry has played a role in the changing dynamics and identity of the Moranbah community.

Changed work patterns were perceived to reduce the time locals had available to spend on recreational pursuits, community activities and hobbies. Particular mention was made to the difficulty mineworkers experienced in being available to attend sporting fixtures on weekends, maintain regular social connections and / or contribute to some community and family events due to the time involved.

Feedback during BMA consultation with Moranbah residents and organisations in 2012, indicated that Moranbah and the IRC LGA have strong mining connections and that community members see Moranbah as a 'mining town'. The community enjoys the opportunity to earn a good income while being close to their families and pursuing active leisure activities outside of work. Shared connections through similar life experiences add to the sense of community. While Moranbah was a purpose-built mining town, some local stakeholders placed emphasis on the fact that 'not everyone is a miner or married to one'. This has been recognised in the assessment.

### **3.3.4 Isaac Regional Council**

#### **3.3.4.1 History**

IRC was formed in 2008 with the amalgamation of Belyando, Broadsound and Nebo Shire Councils.

Belyando Shire, named after Belyando River, began as a local government district in 1879, following the establishment of the town of Clermont in 1865. By the 1890s, after early mining activities for gold and copper, Belyando Shire became host to large scale mining and smelting activities. Substantial coal mining at Blair Athol (established in the 1860s) was facilitated by an extension to the Emerald to Clermont rail line in 1910.

Broadsound Shire was also established as a local government district in 1879, however unlike Belyando Shire its economy was predominantly based on cattle grazing until the 1970s.

Open cut coal mining began in the late 1960's with the Goonyella Mine and Peak Downs Mine. In the 1970s the Utah Development Company started the Saraji open cut coal mine (130 km west of St Lawrence). The mining town of Dysart, 25 km south of the mine, was established in 1973.

There was a minor gold rush at Mount Britton, 30 km north of Nebo township, starting in 1881 and declining by 1890 when Nebo regained its position as the leading township. Nebo became a separate district to the Broadsound division in 1883.

The growth of the Bowen Basin coal fields throughout the 1970s initiated new railway lines to the Mackay harbour. The Peak Downs line (1972) and the Blair Athol line (1983) intersect at Coppabella, a railway town in the southwest of the former Nebo Shire.

#### **3.3.4.2 Values**

Results of the Isaac Community Plan consultation process, found almost all (98%) of participants had chosen to live in the Isaac Region for community, lifestyle and liveability reasons. Key locality and community aspects valued by residents in Moranbah include:

- strong community spirit;
- a casual, relaxed lifestyle centred around family, health, and sporting associations;
- a wide range of sporting facilities, and access to community centres;

- a higher than average level of social advantage (as evidenced by the SEIFA indexes, see Section 3.4.2);
- the highly valued 16 bed hospital, police, ambulance and fire stations; and
- a range of local retail services.

At the broader MIW Regional level, the vision for the Mackay Isaac Whitsunday region as described in the MIW Plan is: “a vibrant region where the values of the community and industry are respected and in balance with the natural environment... natural assets and abundant resources are responsibly managed.... and ... has a resilient and inclusive community ... where residents and visitors enjoy an active, health and safe lifestyle” (p. 10). Social values identified in the Regional Plan include:

- Manage and sustain regional population growth and significant demographic changes;
- Enhance the economic diversity of the region and support local business sustainability;
- Improve diversity of employment opportunities in the region;
- Improve housing availability and affordability to support growth and to reduce housing stress on low-income earning residents or young families;
- Increase the capacity and variety of social infrastructure and service (including community, cultural, educational, health and recreational facilities);
- Recognise and foster existing community values, including character, cultural heritage, diversity, amenity, safety, access, and social capital; and
- Promote the development of sustainable, diverse and vibrant communities across the MIW Region.

The draft MIW Regional Plan, with a planning horizon of 20 years, was launched on 25 May 2011. Strategic directions of the Regional Plan include ‘Strong Communities’, which notes that planning for social infrastructure for the growing population is a key challenge. The trend towards Drive-in Drive-out (DIDO) and Fly-in Fly-out (FIFO) workforces is also noted, as is a preference of existing community members that social and economic opportunities, and a mix of housing, are provided in local towns, to enable people to settle permanently in the region (Queensland Government 2012, p.12).

Specific challenges to the adequacy of social resources in the face of strong growth are noted in the MIW Regional Plan as including geographically dispersed communities, a growing population including mobile and temporary residents, reliance on industries subject to market volatility, and existing issues of disadvantage. The need for a broader range of health and community services is also prominent, including demands placed on infrastructure by non-resident workers (Queensland Government 2012, p.33).

The Regional Plan notes housing affordability as a key concern creating pressure on low income families, young families and non-mining businesses seeking workers. The establishment of Urban Development Areas, such as Moranbah, is a key initiative to address housing supply issues, as is support for higher density dwellings near activity centres in the Regional Plan (Queensland Government 2012, p.113).

## 3.4 Demographic Characteristics

### 3.4.1 Population size and growth

#### 3.4.1.1 Usual resident population

At the 2011 Census, Moranbah had a usual resident population of 8,965 persons, accounting for 39.7% of IRCLGA’s population, and 5.4% of the MIW Region population. The community recorded an increase

of 1,194 persons between 2006 and 2011 Census years (20.6% growth), which is generally consistent with the rate of growth (21.4%) that occurred between 2001 and 2006.

IRC LGA recorded 22,588 residents at the 2011 Census, comprising 13.5% of the MIW Region's population of 166,812. Isaac LGA experienced 14% population growth while the broader MIW Region experienced 11% growth between 2006 and 2011, both a higher growth rate than the Queensland average. A breakdown of population change between 2006 and 2011 across the Moranbah, Isaac and MIW regions is provided in Table 3.3. These data are based on the ABS's previous Australian Statistical Geography Classification to allow for trend analysis between 2006 and 2011. Table 3.3 also shows that the existing gender imbalance increased across each area between 2006 and 2011, so that 55.49% of the Moranbah population were male, with a slightly higher proportion of males at the Isaac regional level.

**Table 3-3 Population change across the areas of influence 2006-2011**

	Moranbah	IRC LGA	MIW Region	Queensland
<b>2011</b>				
<b>Males</b>	4,975	55.49%	12,549	55.56%
<b>Females</b>	3,990	44.51%	10,039	44.44%
<b>Total</b>	8,965	-	22,588	-
<b>2006</b>				
<b>Males</b>	4,105	55.2%	10,963	55.3%
<b>Females</b>	3,327	44.8%	8,858	44.7%
<b>Total</b>	7,432	-	19,821	-
<b>% growth</b>	20.6%		14.0%	

Source: ABS 2011 (all), 2006 (all),

### 3.4.1.2 Full-time equivalent population

The Bowen Basin Population Report (2012) provides provisional Full Time Equivalent (FTE) population estimates for towns and LGAs in the Bowen Basin as of June 2012. The FTE population of Moranbah was calculated at 13,575 people, of whom 4,585 (34%) were non-resident workers. The non-resident workforce is estimated to comprise 42% of the IRC LGA FTE population and 23% of the FTE population across the Bowen Basin, revealing a higher concentration of non-resident workers in the IRC LGA. This is linked to the increase in males as a proportion of the regional population.

Around 25,035 non-resident workers on-shift were counted in the Bowen Basin in late June 2012, which was an increase of 4,515 people (or 22%) from June 2011. This is shown in Table 3-4.

**Table 3-4 FTE population comparisons in Moranbah, the IRC LGA and Bowen Basin, June 2012<sup>3</sup>**

Population	Moranbah	IRC LGA	Bowen Basin
<b>Resident population</b>	8,990	23,720	<b>82,065</b>
<b>Non-resident worker population</b>	4,585	17,125	<b>25,035</b>
<b>FTE Population</b>	13,575	40,850	<b>107,100</b>
<b>Non-resident worker population as % of FTE population</b>	<b>34%</b>	<b>42%</b>	<b>23%</b>

Source: OESR 2012 <http://www.oesr.qld.gov.au/products/publications/bowen-basin-pop-report/bowen-basin-pop-report-2012.pdf>

OESR notes that following strong growth between 2010 and 2012, a period of ‘comparatively subdued activity is projected to follow’, and according to all four OESR projection series, the non-resident population of the Bowen Basin is expected to remain relatively stable over the year to June 2013, with limited growth or declines projected to 2014. Based on what is currently known, OESR’s 2012 Series A projections (projects existing and under construction) sees a decline in non-resident workers from 25,040 in 2012 to 21,260 in 2019. Series C projections (which include projects that exist, under construction or have lodged an EIS) also show a small decrease to 24,510<sup>4</sup>.

These trends will need to be monitored as part of final planning for social impact management.

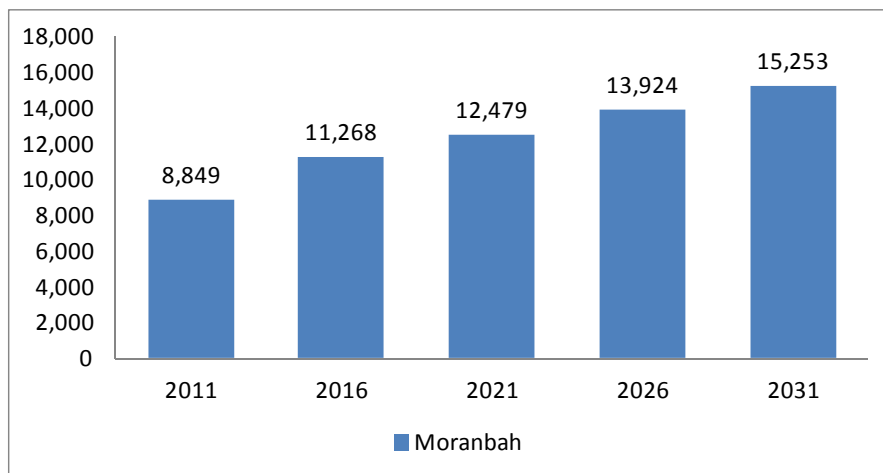
### 3.4.1.3 Future population

In mid 2011, Moranbah’s resident population was projected to grow by 72% (an annual growth rate of 3.61%) between 2011 and 2031. This is a robust level of growth which would see the need for a significant increase in housing stock, an increased number of places in schools, childcare centre and hospital services, and increased investment in social infrastructure commensurate with the needs of a larger regional centre.

Figure 3.3 shows the projected increase in population in Moranbah from 2011 to 2031. These projections are based on the Australian Bureau of Statistics’ 2011 Australian Statistical Geography Standard for Statistical Area Level 2.

<sup>3</sup> Users of these population data should be aware that in July 2012 the ABS released preliminary Census rebased ERPs for the years 2007 to 2011. These ERPs, which will not be finalised until August 2013, differ substantially from previous estimates for all LGAs and most localities in the Bowen Basin. As a result, the ERP components of FTE population data from previous editions of the Bowen Basin Report are not directly comparable to those in Table 3. See <http://www.oesr.qld.gov.au/products/tables/index.php> for further information.

<sup>4</sup> Queensland Treasury and Trade OESR 2013: Bowen and Galilee Basins non-resident population projections, 2012-13 a <http://www.oesr.qld.gov.au/products/publications/bowen-galilee-basins-non-resident-pop-proj/bowen-galilee-basins-non-resident-pop-proj-2012-13.pdf>



**Figure 3.3 Projected population growth in Moranbah 2011 to 2031**

Source: Queensland Government population projections, 2011 edition (medium series), Office of Economic and Statistical Research, Queensland Treasury and Trade.

#### 3.4.1.4 Gender and age distributions

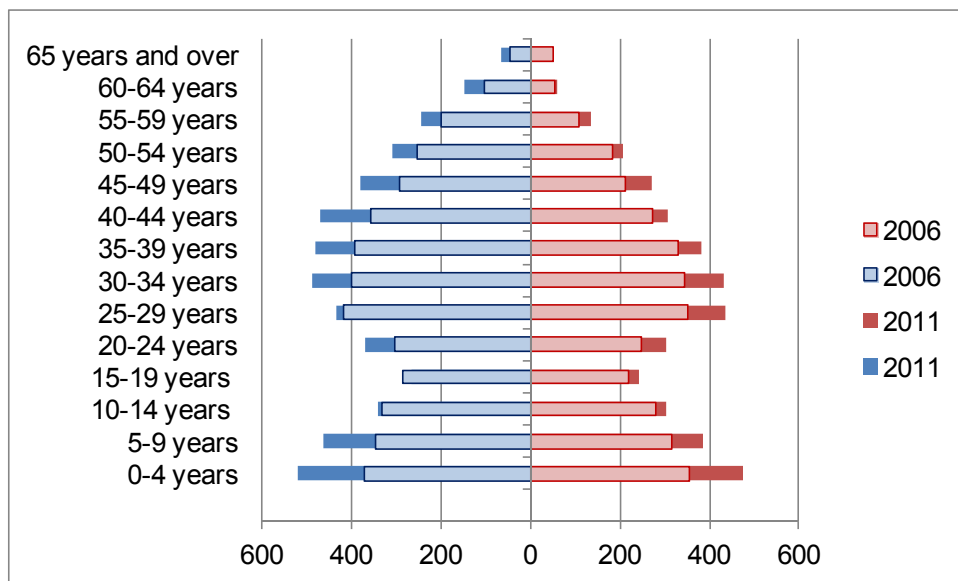
Figure 3.4 provides an overview of Moranbah’s population by age group and gender. Between 2006 and 2011, the largest proportion of Moranbah’s population remains in the 25-49 age cohort (comprising 45% of the overall population). The most significant areas of population growth between 2006 and 2011 were in the 0-4 and 5-9 age cohorts, at a rate of 36% and 28% respectively. This may suggest that young families are moving to the area to take advantage of the employment and lifestyle.

Figure 3.4 also shows that the existing gender imbalance increased across Moranbah, Isaac and MIW region between 2006 and 2011, so that 55.49% of the Moranbah population were male, and the Isaac region had a slightly higher proportion of males at 55.56%.

There was however slow growth in Moranbah’s older youth population from 10-14 and 15-19 years (0% and 5% growth respectively). These results may indicate a choice by residents to pursue secondary and further education for their children away from Moranbah.

Between 2006 and 2011, there was a 29% increase in persons aged 45-49 years (61% male in 2011), and a 33% increase in persons aged 60-64 years (71% male in 2011).





**Figure 3.4 Moranbah population pyramid for 2006 and 2011**

Source: ABS 2006e, 2011c

### 3.4.2 Social Characteristics

Social characteristics relevant to the Moranbah and Isaac LGA are summarised in Table 3.5 and in the following subsections. Points of interest from the 2011 census include:

- Moranbah and Isaac Region had significantly younger populations with median ages of 29 and 31 respectively, compared to MIW Region (35 years) and the State (36 years). The younger age cohort correlates with high labour force participation rates and numbers of young families in Moranbah and Isaac LGA;
- Moranbah and Isaac region generate significantly higher individual and household incomes than those available across MIW region and the state;
- Moranbah and Isaac region maintain a low rate of disadvantage according to 2011 SEIFA scores. These scores reflect a dominance of the mining economy in the Bowen Basin and the availability of higher industry wages;
- the Index of Education and Occupation in both Moranbah and Isaac LGA (938 and 927 respectively) showed substantially lower levels than the standardised baseline score of 1,000. This is a partial indication of the limited economic and employment diversity in the region. It also reflects the rural nature of Moranbah and Isaac LGA;
- the Indigenous proportion of the MIW Region population was above the state average in 2011. A lower proportion of the Indigenous population resides in the Isaac region and Moranbah than in the MIW region as a whole;
- Both Moranbah and Isaac LGA are more culturally homogenous with 80% of the population born in Australia, compared with 73.7% of the population of Queensland. Other main countries of birth reported were New Zealand (4.0% and 3.4%), the United Kingdom (1.5%), Philippines (1.2% and 0.8%) and South Africa (1.1% and 0.9%);
- almost 88% of Moranbah's population spoke English as their primary language in 2011, compared 87% in Isaac LGA and 85% across the State;



- the total number of families in Moranbah has increased by 18.6% since 2006, compared with an 11% increase across Isaac LGA. The most common family type in Moranbah is couple families with children (61%), followed by couples without children (29%);
- of the total population over 15 years in Moranbah, 52% were married, 36% never married, and 10% separated or divorced. These rates are generally consistent with Isaac region;
- a smaller percentage of Moranbah and the Isaac region's population (1% and 1.4% respectively) were identified as having a moderate to severe disability requiring assistance or care, compared to regional and State averages. Lower numbers across this region are partially attributable to the lower median age and the rural location which brings with it additional challenges for accessing specialist care and services; and
- levels of volunteering are generally consistent across Moranbah, Isaac LGA and Queensland (14.4%, 15.3%, and 14.9% respectively). Volunteering rates across the MIW Region were lower (13.1%). Consultation participants in 2012 also identified a concern about the declining levels of volunteerism in relation to sustaining services such as Lifeline and the Salvation Army (now closed in Moranbah) sporting teams and management committees for community services.

**Table 3-5 Key social characteristics in the Project's areas of influence**

	Moranbah		IRC LGA		MIW Region		Queensland	
<b>2011 Population</b>	8,965	-	22,588	-	166,812	-	4,332,739	-
<b>Median age 2006</b>	29	-	31	-	35	-	36	-
<b>Median age 2011</b>	29	-	31	-	35	-	36	-
<b>Indigenous</b>	234	2.6%	605	2.70%	6,849	4.10%	155,826	3.60%
<b>Spoken LOTE at home 2011</b>	448	4.9%	819	3.6%	7385	4.40%	423,841	9.80%
<b>Disability</b>	91	1%	316	1.40%	5,643	3.40%	192,019	4.40%
<b>Volunteering</b>	1239	13.82%	3446	15.30%	21,874	13.10%	645,543	14.9%

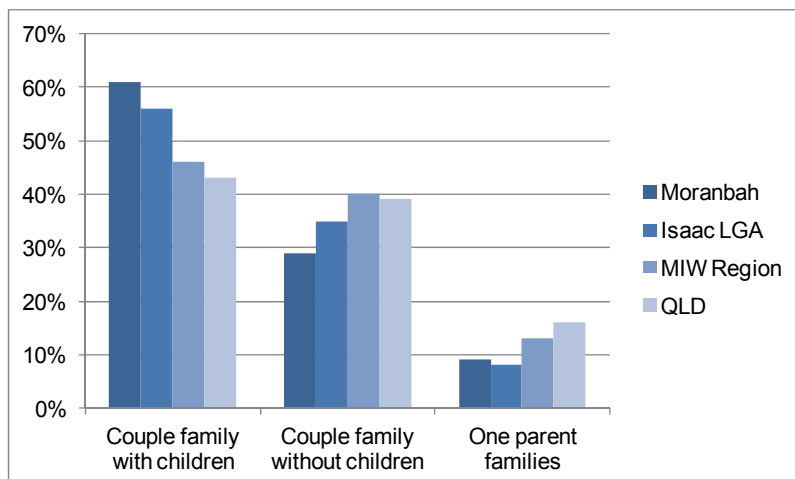
Source: ABS 2011 (all), 2006 (all)

#### 3.4.2.1 Family characteristics

There were 2,122 families in Moranbah in 2011, an 18.6% increase on the 2006 census results of 1,789 families. That, compared with an 11% increase of total families in the Isaac region from 2006 (4,707 families) and 2011 (5,258 families).

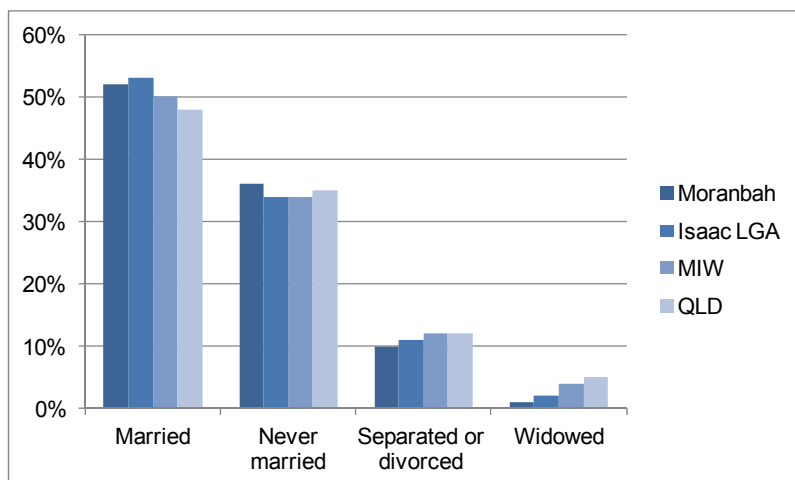
The most common family type in Moranbah is couple families with children (61%), followed by couples without children (29%) and sole parent families (9%). The composition of Moranbah is fairly consistent with the Isaac Region (56% couples with children, 35% couple family without children, and 8% sole parent family). Family composition across MIW region and Queensland demonstrates a higher proportion of sole parent families comprising 13% and 16% of the total respectively.

The composition of Moranbah and Isaac LGA reflect the prevalence of working families associated with mining and other industries. These findings support the results of BMA's stakeholder consultation activities in 2012, which identified Moranbah as a family-oriented community. A breakdown of family structure for Moranbah, IRC LGA, the MIW Region and Queensland in 2011 is shown in Figure 3.5.



**Figure 3.5 Family characteristics across areas of influence**  
 Source: ABS 2011 (all),

Of the total population over 15 years in Moranbah, approximately 52% are married with 36% never married, and 10% separated or divorced, and 2% widowed. These rates are generally consistent with Isaac region. Figure 3.6 shows the marital status of persons aged 15 years and over across the region 2011.



**Figure 3.6 Marital status of persons over 15 across areas of influence**  
 Source: ABS 2011 (all)

### 3.4.2.2 Socio-economic advantage and disadvantage

The Socio-Economic Indices for Areas (SEIFA) include four summary measures of socio-economic conditions by geographic areas created from 2011 Census results. The indices (Socio-economic Advantage and Disadvantage, Socio-economic Disadvantage, Economic Resources and Education and Occupation) are derived from Census variables including low income, low educational attainment, unemployment, incomes, housing expenditure and assets, and dwellings without motor vehicles, and educational attainment, employment and vocational skills.

The Socio-economic Advantage and Disadvantage 2011 SEIFA Index scores for Moranbah (SSC) and IRC LGA in were 1,054 and 1,028 respectively. These scores are above the standardised baseline score of 1,000, indicating that the study area is generally an area of less relative disadvantage. The index of Relative Socio-economic Disadvantage and Index of Economic Resources also showed higher scores in Moranbah (1,065 and 1,047 respectively) and Isaac LGA (1,047 and 1,036 respectively), as shown in Table 3-6.

The Index of Education and Occupation in both Moranbah and Isaac LGA was substantially lower than the standardised baseline score of 1,000 (938 and 927 respectively), indicating relative disadvantage (lower overall educational attainment, post-school qualification levels, female labour force participation and occupational diversity) as measured by this index.

**Table 3-6 Summary of SEIFA for Moranbah and IRC LGA**

	2011 SEIFA	Index of Relative Socio-economic Advantage and Disadvantage		Index of Relative Socio-economic Disadvantage		Index of Economic Resources		Index of Education and Occupation	
		Score	Decile	Score	Decile	Score	Decile	Score	Decile
<b>Moranbah (SSC)</b>	31100	1054	8	1065	9	1047	7	938	4
<b>Isaac (LGA)</b>	33980	1028	9	1047	9	1036	9	927	3

Source: ABS 2011

### 3.4.2.3 Income and the cost of living

Table 3.7 presents 2011 and 2006 medians of individual and household incomes across Moranbah, Isaac, MIW region and Queensland. It shows:

- Moranbah's individual weekly income has increased by 38% over the five year period from 2006-11. This compared with 41% growth across Isaac LGA, 52% growth across MIW and 23% across Queensland.
- Moranbah's weekly household income has grown by 14% over the same period, compared with a 37% increase across Isaac LGA, 56% growth across MIW and 19.5% growth across QLD.

This indicates higher growth in incomes across the MIW region than in Moranbah and Isaac, and may reflect both increases in the Isaac region due to increased number of mining jobs, and an increase in uptake of jobs across the MIW region due to the availability of FIFO.

Labour force participation in MIW region was 67% in 2011, up from 64% in 2006. While labour force participation in 2011 was higher again in Moranbah and Isaac region (78% and 73%), growth across MIW region was greater than the State average, which had a participation rate of 62.8% in 2011 up from 61.8% in 2006.

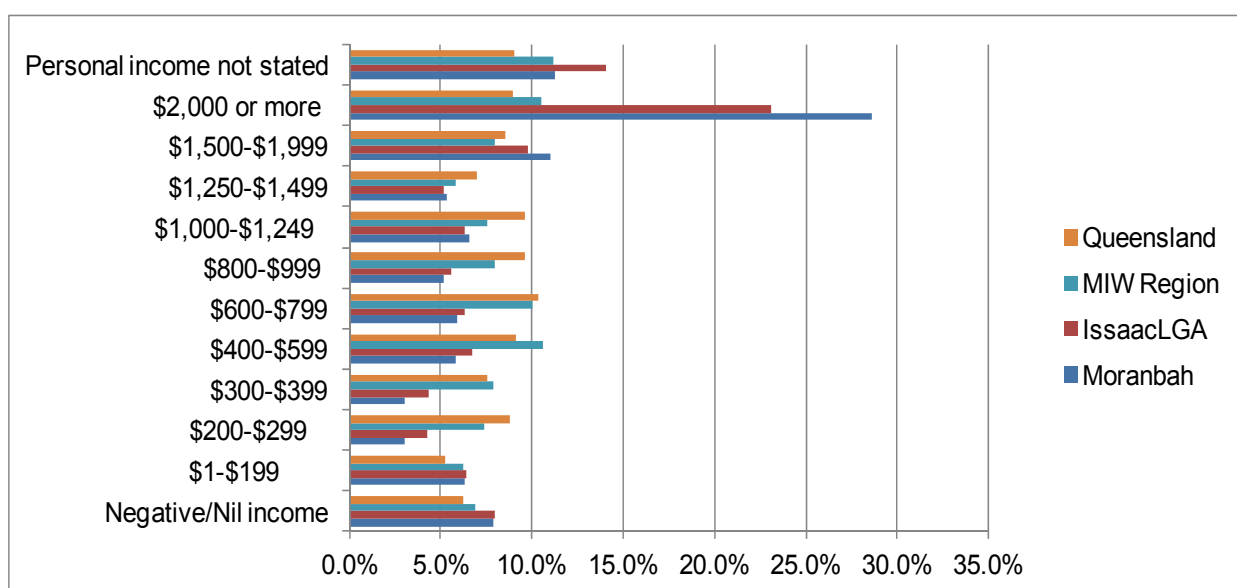
**Table 3-7 Median Weekly Individual and Household Incomes, 2006-2011**

	Moranbah	IRC LGA	MIW Region	Queensland
<b>2011</b>				
<b>Individual weekly income (AUD)</b>	1,275	1,052	793	587
<b>Household weekly income</b>	2,778	2,579	1774	1,235
<b>2006</b>				
<b>Individual weekly income</b>	923	742	521	476
<b>Household weekly income</b>	2,436	1,827	1,138	1,033

Source: ABS 2011 (all), 2006 (all)

Figure 3.7 compares the 2011 median individual income across the Project's area of influence, as a percentage of each population over 15 years. Findings include:

- 28.6% of Moranbah's population over 15 years earned an individual weekly income above \$2,000, followed by 23.1% in Isaac LGA. This is compared with 10.6% and 5.5% across MIW region and the State;
- Moranbah and Isaac LGA also recorded a higher proportion of its population earning nil income, (7.9% and 8%) compared with MIW region and the State (6.9% and 6.2% respectively);
- 14% of the population in Isaac region did not state their personal income, which includes the 11.2% of Moranbah's population, and is compared with 11.2% in MIW region and 9.1% across the State.



**Figure 3.7 Individual weekly income in Project areas of influence, 2011**

Source: ABS 2011 (all)

A 2010 survey of regional retail prices of goods and services in 75 selected Queensland cities and towns compared relative retail prices to the average for the Brisbane Statistical Division (Brisbane).

The spatial price index (SPI) is presented on the basis of Brisbane as the benchmark (Brisbane = 100.0). The index number for each centre indicates the relative level of prices in that centre compared with Brisbane.

A 'full basket' of items was priced in 43 centres, and a 'partial basket' was priced in a further 18 centres. The full basket indexes are based on a comprehensive range of goods and services purchased by Queensland households. The list of items in the full basket was based on those used by the Australian Bureau of Statistics (ABS) to calculate the Consumer Price Index (see Table 3.8).

**Table 3-8 Range of full basket indexes**

Index	Lowest value	Highest value	Range
	— index —		index range
<b>All items</b>	92.1	113.9	21.8
<b>Food</b>	92.6	112.0	19.4
<b>Alcohol and tobacco</b>	89.0	113.7	24.7
<b>Clothing and footwear</b>	86.4	125.8	39.4
<b>Housing</b>	56.7	165.4	108.7
<b>Household content and services</b>	91.7	110.4	18.7
<b>Health, education and communication</b>	98.3	101.8	3.5
<b>Transportation</b>	94.4	109.0	14.6
<b>Recreation</b>	89.7	113.8	24.1
<b>Financial and insurance services</b>	95.9	105.7	9.8
<b>All items less housing</b>	97.3	105.9	8.6

The survey found that:

- the three centres with the highest 'All items' index points above Brisbane were Moranbah (13.9% higher than Brisbane), followed by Blackwater (7.9% higher) and Mount Isa (5.1% higher).
- the centre with the highest Housing index was Moranbah, where the cost of housing was 65.4% higher than Brisbane. The next highest price for housing was in Blackwater (30.7% higher), and then Mount Isa which was 15.3% higher than Brisbane.

Four separate indexes were produced from the partial basket of items: Food, alcohol and tobacco; other groceries; Fuel; and Rent. No overall index was produced as these items only represent around 45% of household purchases of goods and services.

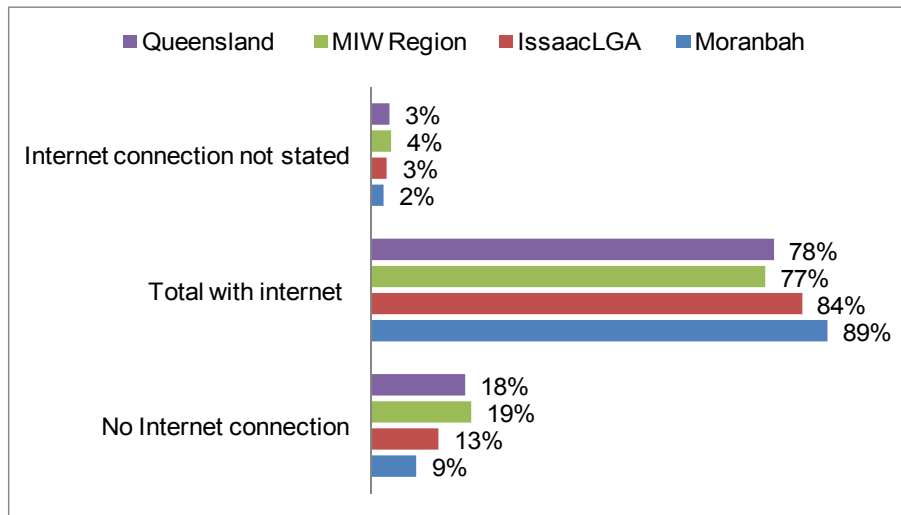
Of the 18 centres surveyed on partial basket items, the highest Rent index scores were Dysart (77.2% higher than Brisbane), Moranbah (71.6 % higher) and Blackwater (33.6% higher).

In the last two years since the 'basket of goods' measures were taken, it's likely the cost of living decreased overall in Moranbah due to much lower rental costs for housing. However, it is more likely that Moranbah would experience price rises in:

- Food and non-alcoholic beverages, due to transportation cost increases;
- Health, reflecting the demand of a growing population;
- Alcohol and tobacco, reflecting lifestyle choices more prevalent in construction, mining and associated industries; and
- energy and insurance costs, in common with the rest of the state.
- BMA subsidises housing for its employees so that housing costs are limited to around \$70/week, which assists those employees to cope with the higher costs of living.

### 3.4.2.4 Technology

Figure 3.8 presents the percentage of dwellings with internet connection across the Project's areas of influence in 2011. Moranbah recorded the highest proportion (89%) of dwellings with internet, followed by Isaac LGA with 84%. These are significantly higher rates of uptake compared with MIW region and the State. The higher rate in Moranbah and Isaac LGA can be considered as a reflection of information and service access needs in rural and regional areas. With the increase in smart phones with internet connections, it is becoming difficult to measure internet access reliably, and new national measures will need to be sought.



**Figure 3.8 Internet connection across the Project's areas of influence**

Source: ABS 2011

### 3.4.3 Training, Employment and Businesses

#### 3.4.3.1 Educational attainment

At the 2011 Census, 57.8% of Moranbah's population over 15 years stated year 11 or 12 (or equivalent) as their highest level of schooling. This compared with 51.6% in 2006. Moranbah's 2011 results increased commensurate with Isaac region's (50.2%, up from 38.2% 2006), the MIW Region (46.67%, up from 40.9% in 2006) and Queensland (55.3% in 2011, up from 49.5% in 2006).

Table 3.9 shows the highest year of school completed (at 2011) for the population aged 15 and over in Moranbah, the IRC LGA, and the MIW Region in comparison to Queensland.

**Table 3-9 Highest year of school completed**

Highest year of school completed	Moranbah		Isaac R LGA		MIW Region		QLD	
	No.	%	No.	%	No.	%	No.	%
Year 12 or equivalent	3,007	48.1	6,820	41.7	48,224	38.1	1,595,327	48.0
Year 11 or equivalent	607	9.7	1,382	8.5	10,846	8.6	241,668	7.3
Year 10 or equivalent	1,596	25.5	4,446	27.2	37,421	29.6	815,723	24.6
Year 9 or equivalent	238	3.8	812	5.0	7,067	5.6	161,393	4.9
Year 8 or below	140	2.2	702	4.3	8,588	6.8	203,749	6.1
Did not go to school	0	0	32	0.2	376	0.3	15,353	0.5
Not stated	667	10.7	2,143	13.1	14,035	11.1	287,548	8.7
<b>Total</b>	<b>6,255</b>	<b>100</b>	<b>16,337</b>	<b>100.0</b>	<b>126,557</b>	<b>100</b>	<b>3,320,761</b>	<b>100</b>

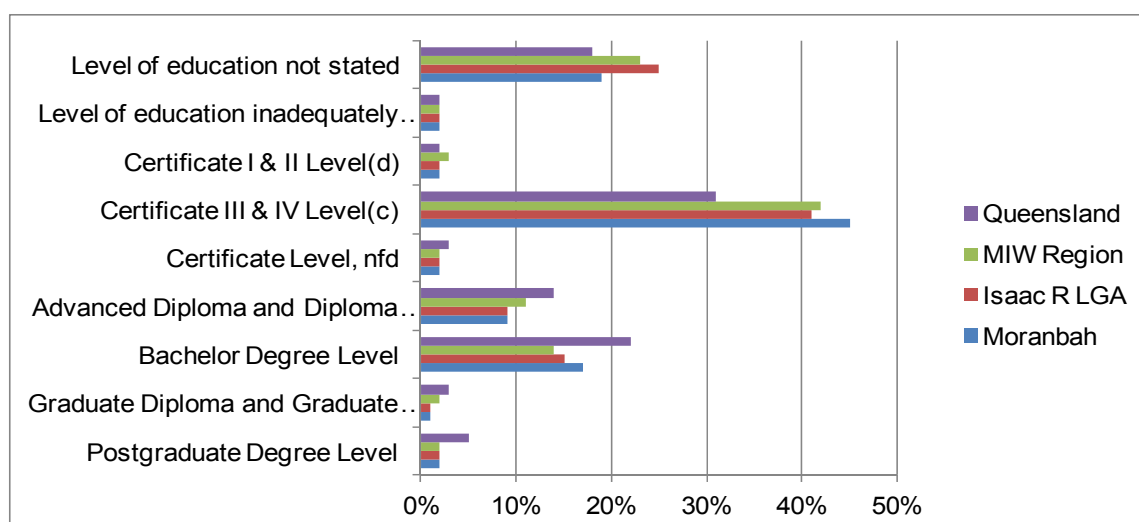
Source: ABS 2011

Figure 3.9 shows the level of educational attainment of those persons in the areas of influence who have indicated having post-secondary qualifications.

The most prevalent post-secondary qualification in Moranbah was Certificate (III and IV) qualification at 45%, followed by Bachelor Degree level at 17%. A further 19% of Census participants did not state their post-secondary qualification level.

In 2011 Moranbah had a higher proportion of its population over 15 years with Certificate (III and IV) level qualifications, compared with Isaac region (41%, MIW region 42% and the State 31%). Moranbah also had a higher proportion of its population over 15 years with a Bachelor Degree compared with Isaac region (15%) and MIW region (14%); however Queensland maintains the highest proportion with 22% of its overall population holding a Bachelor Degree.

This can be attributed to a skilled workforce population that has moved to Moranbah for work in the mining industry.



**Figure 3.9 Level of post-secondary qualifications**

Source: ABS 2011



### 3.4.3.2 Labour force and employment characteristics

Mining was the main employment industry in Moranbah and Isaac LGA (44.24% and 39.48% respectively) while only representing 14.42% of the employment industry for MIW region and 2.6% across the State.

Construction (7.03%), accommodation and food services (6.58%), retail trade (5.99%), and education and training (5.39%) follow mining as the next main industries of Moranbah.

Characteristics of the employment and labour market across the study area are presented in the following tables (3.10, 3.11 and 3.12). Key points include:

- higher labour force participation in Moranbah (78%), compared to Isaac LGA (73%), MIW Region (67%), and the State (62.8%);
- high labour force participation rate among Indigenous Australians in Isaac LGA (77%), with 65% of the labour force working full time;
- higher proportion of the labour force working full time in Moranbah (72.5%), compared with the IRC and MIW regions;
- lower unemployment rate in Moranbah and Isaac, compared with MIW Region and the state; and
- a higher rate of unemployment among females in Moranbah than Isaac LGA, although still a lower rate than MIW Region and the state;

Technicians and trades workers accounted for 24.67% of occupations in Moranbah, 20.57% across Isaac LGA and 20.46% across MIW region. Machinery operators and drivers are an equally prevalent occupation in Moranbah and Isaac LGA (23.04% and 24.27% respectively) In contrast, professionals made up 18.91% of occupations across the state, while technician and trades made up 14.93% and machinery operators and drivers just 7.32%. The high proportion of trade, technician and machinery operation workers in Moranbah and Isaac LGA is likely due to high rates of employment in the mining industry.

**Table 3-10 Labour force participation**

Labour Force Status	Moranbah %			IRC LGA %			MIW Region %			Queensland %		
	Male	Female	Pop.	Male	Female	Pop.	Male	Female	Pop.	Male	Female	Pop.
<b>Total labour force</b>	84.2	69.7	77.9	78.7	65.4	72.9	72.6	61	67.1	67.8	58	62.8
<b>Not in the labour force</b>	3.8	24.8	12.9	7	27.3	15.8	16.8	33	24.5	25.6	36.6	31.2
<b>Total employed (% of labour force)</b>	98.9	96.1	97.8	98.9	96.7	98	97.2	95.4	96.4	93.9	93.9	94.9
<b>Full-time (% labour force)</b>	86	51.4	72.5	84.8	52	72.1	80.8	49.5	67.3	71.7	46.8	60
<b>Part-time (% labour force)</b>	4.8	37.1	17.9	6.6	37.2	18.5	9.9	39.5	22.7	16.7	41	28.2
<b>Total unemployed</b>	1.1	3.9	2.2	1.1	3.3	2	2.8	4.6	3.6	6.1	6.1	6.1

Source: ABS 2011

**Table 3-11 Employment by industry category in Moranbah, the IRC LGA, MIW Region and Queensland in 2011**

Industry	Moranbah	IRC LGA	MIW Region	Queensland
Agriculture, forestry and fishing	0.51%	8.54%	4.88%	2.72%
Mining	44.24%	39.48%	14.42%	2.60%
Manufacturing	3.10%	2.79%	7.86%	8.42%
Electricity, gas, water and waste services	0.71%	0.84%	0.88%	1.22%
Construction	7.03%	6.30%	9.71%	9.01%
Wholesale trade	2.79%	1.84%	3.70%	3.64%
Retail trade	5.99%	5.82%	9.55%	10.67%
Accommodation and food services	6.58%	6.38%	7.59%	6.96%
Transport, postal and warehousing	3.26%	3.65%	6.45%	5.25%
Information media and telecommunications	0.20%	0.28%	0.58%	1.24%
Financial and insurance services	0.59%	0.61%	1.22%	2.66%
Rental, hiring and real estate services	2.29%	1.43%	1.77%	1.81%
Professional, scientific and technical services	1.84%	1.62%	3.98%	6.51%
Administrative and support services	3.22%	2.99%	2.77%	3.19%
Public administration and safety	3.12%	3.18%	3.81%	6.71%
Education and training	5.39%	5.25%	5.51%	7.89%
Health care and social assistance	3.73%	3.59%	7.60%	11.89%
Arts and recreation services	0.51%	0.29%	0.53%	1.39%
Other services	2.92%	2.86%	4.65%	3.86%

Source: ABS 2011

**Table 3-12 Employment by occupation in the areas of influence**

Occupation	Moranbah	IRC LGA	MIW Region	Queensland
Managers	7.29%	11.94%	11.07%	12.04%
Professionals	12.43%	10.77%	12.15%	18.91%
Technicians and trade workers	24.76%	20.57%	20.46%	14.93%
Community and personal service workers	5.08%	4.63%	7.26%	9.95%
Clerical and administrative workers	10.18%	9.55%	12.12%	14.68%
Sales workers	5.40%	4.90%	8.15%	9.79%
Machinery operations and drivers	23.04%	24.27%	15.05%	7.32%
Labourers	10.10%	11.49%	11.96%	10.55%
Inadequately described/not stated	1.72%	1.87%	1.79%	1.82%

Source: ABS 2011

### 3.4.3.3 Skills shortages

Over the past five years, increased training and softer demand for skilled labour have led to a marked fall in the extent of skill shortages in Australia. A summary of national skill shortages produced in November 2012 by the Australian Department of Education, Employment and Workplace Relations (DEEWR) showed:

- the number of occupations in shortage<sup>5</sup> was at its lowest in 2012 since the beginning of the series in 2007 (43% compared with 84% in 2007);
- recruitment was easier in 12 of the 19 occupational groups in 2012;
- around 68% of vacancies were filled in 2012 (up from 62% in 2011) and there were more suitable applicants per vacancy (2.0, on average, compared with 1.7); and
- on average, employers in metropolitan areas also attracted, slightly more suitable applicants per vacancy than regional employers (2.1 compared with 1.8).

The easiest vacancies to fill in 2012 included Building Associates, School Teachers and Social and Welfare Professionals. The marked easing in demand for Building Associates and Construction Trades reflects lower activity in the building construction sector in 2012. There is now relatively strong competition for these vacancies with high numbers of suitable applicants per vacancy (3.2 and 2.4, respectively).

Shortages persist for resource sector occupations including:

- engineering Professionals (evident in six of the eight engineering professionals assessed in 2012), with less than half the vacancies filled;
- technicians and trades workers, with employers experiencing more difficulty filling vacancies than those seeking professionals (65% of technician and trade vacancies were filled with an average of 1.9 suitable applicants per vacancy); and
- shortages of Automotive Trades Workers persist with half the surveyed vacancies filled and an average of one suitable applicant per vacancy.

As described in Section 3.4.3, technicians and trades workers and machinery operators and drivers are prevalent occupations in Moranbah and Isaac LGA. Skill shortages in these areas will require significant consideration in BMA's workforce planning, recruitment and training strategies. Table 3.13 summarises the changes in skills shortages between 2011 and 2012.

<sup>5</sup> Based on the set of 76 occupations which have been continuously assessed as part of the DEEWR skill shortage research program between 2007 and 2012.

**Table 3-13 National Skill Shortage Summary, 2012**

	Proportion of vacancies filled		Number of suitable applicants per vacancy		Annual labour market change	No. of occupations assessed (and in shortage in 2012) <sup>6</sup>
	2012 (%)	Annual change (%)	2012	Annual change		
<b>Occupations</b>						
Professions	74	12	2.2	0.4	↑	39 (13)
Technicians and Trades	65	3	1.9	0.3	↑	45 (18)
Accountants	77	-11	2.2	-2.3	↓	1 (0)
Agriculture and Horticulture	75	20	2.1	0.4	↑	7 (1)
Automotive Trades	50	7	1.0	0.1	↑	4 (4)
Building Associates	80	11	3.2	1.7	↑	3 (0)
Building Professions	66	6	2.9	1.2	↑	5 (2)
Child Care Occupations	61	3	1.2	0.1	↑	2 (1)
Construction Trades	72	0	2.4	0.2	↔	11 (1)
Electro-technology and Telecommunications Trades	72	18	2.1	0.9	↑	6 (2)
Engineering Associates	57	-2	1.6	0.2	↔	2 (2)
Engineering Professions	47	7	1.4	0.1	↑	8 (6)
Engineering Trades	58	-7	1.5	0.0	↓	7 (2)
Health Diagnostic	72	6	2.6	0.5	↑	7 (2)
Health Therapy Professions	77	19	2.0	0.8	↑	4 (0)
Nurses and Midwives	75	12	1.4	0.3	↑	3 (2)
Resource Sector	44	-8	1.5	0.1	M	8 (6)
School Teachers	89	6	2.6	-0.2	M	4 (1)
Social and Welfare Professions	83	29	3.0	1.4	↑	3 (0)
Queensland	66	1	3.0	0.4	↑	
<b>TOTAL – All SERA Australia</b>	<b>68</b>	<b>6</b>	<b>2.0</b>	<b>0.3</b>	<b>↑</b>	

Key ↑ = easing labour market ↓ = tightening labour market ↔ = relatively stable labour market M = mixed indicators

Source: DEEWR, 2012.

The demand for workers in the resources sector was estimated as part of the QRC study into the growth of the Queensland resources sector (QRC 2011b). The study found that projected expansion in the resources sector will create a significant requirement to expand the supply of labour in Queensland, with excess demand created during both the construction phase and operating phases of the pipeline of resources projects in Queensland up to 2020. The key skill set shortfalls were predicted to include technicians and trade workers, and machinery operators and drivers.

<sup>6</sup> Indicates total number of occupations assessed in the category, with number in brackets showing how many of the assessed occupations are in national shortage.

### 3.4.3.4 Businesses

The ABS collect counts of registered businesses using businesses registered with Australian Business Numbers (ABNs) and a type of activity unit (TAU). Mining operations that dominate the economic base in Bowen Basin – North may be registered for business purposes in other jurisdictions and therefore underrepresented in the following statistics.

Approximately 2,675 registered businesses were operating in the Bowen Basin – North SA3 in 2010-11 (Table 3.14). Of these:

- 93.9% were small businesses with less than 20 employees; and
- around 6.3% were businesses with a turnover greater than \$2 million, higher than the state average of 5.4%.

Other key business characteristics, described in detail in the Economic Impact Assessment follow.

- as with Queensland and Mackay SA4 averages, the majority of businesses registered in the Bowen Basin – North SA3 recorded turnover of less than \$100,000 (45.6%). The region recorded a smaller proportion of business with a turnover between \$100,000 and \$500,000 and a higher proportion of registered business with a turnover of greater than \$500,000.
- Agriculture, forestry and fishing businesses made up 35.2% of the businesses in the Bowen Basin – North SA3 followed by construction (13.4%) and rental, hiring and real estate services (8.5%).

**Table 3-14 Counts of registered businesses, Mackay SA4, 2010-11**

	Small (<20 employees)	Medium (20-100 employees)	Large (>100 employees)	Small businesses as % of total businesses	Businesses with a turnover >\$2m as a % of total businesses
Bowen Basin North	2,675	172	3	93.9%	6.3%
Mackay	9,898	536	36	94.5%	5.9%
Whitsunday	2,375	125	3	94.9%	4.2%
Mackay SA4	14,948	833	42	94.5%	5.9%
Queensland	411,935	17,310	1,161	95.7%	5.4%

Source: Government Statistician, 2012, *Queensland Regional Profiles: Mackay SA4– 2012*, Brisbane: Queensland Treasury and Trade.

### 3.4.4 Community health and wellbeing

According to the World Health Organisation (1948), health is ‘a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity’. There are an extensive range of factors that influence and indicate the level of health and wellbeing present in a community, such as:

- personal health;
- community connectedness;
- access to social infrastructure and services;
- perceptions of personal and community safety; and
- economic activity, employment and income.

The Social Health Atlas of Australia (PHIDU, 2012) presents a range of demographic, socio-economic and public health data to monitor community health and wellbeing. While the transition is underway to

report data by the Australian Statistical Geography Standard, the following information has been presented according to the former Australian Statistical Geography Classification for the former Shires of Isaac LGA (Belyando, Broadsound and Nebo). Modelled estimates (2010) of community strength and connectedness are ranked according to an age-standardised ratio (ASR) per 100 people across each shire and the state (Table 3.15). They indicate:

- a higher age-standardised ratio of unpaid voluntary work in the former Belyando Shire (comprising Moranbah and Clermont), compared with other former shires in Isaac LGA and with Queensland;
- persons over 18 years in Belyando shire had greater access to support outside the household in a crisis (ASR 93.3), compared with Broadsound, Nebo and the state (ASR 92, 91.6 and ASR 92.6);
- Belyando Shire was also modelled to have a higher rate of persons over 18 (or their partner) providing support to other relatives outside the household (ASR 31.5), compared with Broadsound and Nebo (each with an ASR of 30.6) and state (ASR 29.6); and
- perceptions of safety walking alone in local area after dark were modelled to be higher in Broadsound and Nebo shire (with an ASR of 57.1 and 56.9 respectively), compared with Belyando Shire and the state (ASR 47.4).

**Table 3-15 Modelled estimates (2010) of community strength for persons aged 18+ years**

	Unpaid voluntary work in the last 12 months		Able to get support in times of crisis from persons		Provide support to other relatives living outside the household		Feel very safe/safe walking alone in local area after dark (modelled estimate)	
	Number	ASR per 100	Number	ASR per 100	Number	ASR per 100	Number	ASR per 100
<b>Queensland</b>	<b>1,241,603</b>	<b>36.5</b>	<b>3,140,682</b>	<b>92.6</b>	<b>1,007,475</b>	<b>29.6</b>	<b>1,615,295</b>	<b>47.4</b>
Broadsound (S)	2,267	41.1	4,981	92.0	1,713	30.6	3,257	57.1
Nebo (S)	932	40.1	2,114	91.6	721	30.6	1,376	56.9
Belyando (S)	3,759	43.3	8,110	93.3	2,770	31.5	5,178	56.7

Modelled estimates (2010) of self-assessed health and access to health services are also ranked according to an age-standardised ratio (ASR) per 100 people across each shire and the state (Table 3.16). These models indicate:

- Belyando Shire had a lower self-assessed health status of fair/poor (ASR 10), compared with Nebo (ASR 14.2), Broadsound (15.0) and the state (ASR 17.4); and
- Belyando Shire had a significantly lower rate of persons over 18 who delayed medical consultation because they could not afford it (ASR 14.6), compared with Broadsound (ASR 18.6), Nebo (18.2) and the state (19.9). This reflects the greater concentration of high wages around mining towns of Moranbah and Clermont, improving affordability. These results are not a reflection of local service accessibility.

**Table 3-16 Modelled estimates (2010) of persons 18+ self-assessed health and access to services**

	Self-assessed health status of fair/poor		Delayed medical consultation because they could not afford it	
	Number	ASR per 100	Number	ASR per 100
<b>Queensland</b>	<b>583,245</b>	<b>17.4</b>	<b>679,388</b>	<b>19.9</b>
Broadsound (S)	682	15.0	1,096	18.6
Nebo (S)	269	14.2	457	18.2
Belyando (S)	695	10.0	1,389	14.6

Trend data (2003-07) of premature deaths, ranked on average annual ASR per 100,000 persons shows (Table 3-17):

- Nebo Shire had a significantly higher average of deaths from cancer with an average annual ASR per 100,000 of 92.6, compared with the state's annual average ASR of 74.6 and Belyando Shire (ASR 67.3).
- Broadsound had a significantly higher average of deaths from circulatory system diseases with an average annual ASR per 100,000 of 44.3, compared with the state's annual average ASR of 34.4 and Belyando shire (ASR 29.6).

Modelled estimates for Nebo shire were not available, most likely due to low incidence and data de-identification processes.

**Table 3-17 Premature deaths by cause, 15 to 64 years, 2003-07**

	Deaths from cancer		Deaths from circulatory system diseases	
	Number	Average annual ASR per 100,000	Number	Average annual ASR per 100,000
<b>Queensland</b>	<b>10,123</b>	<b>74.6</b>	<b>4,680</b>	<b>34.4</b>
Broadsound (S)	17	76.2	10	44.3
Nebo (S)	7	92.0	#	..
Belyando (S)	20	67.3	9	29.6

### 3.4.5 Community safety

The analysis below is based on data extracted from the Queensland Police Service online crime statistics on 1 July 2013. Data are provided for the Moranbah Police District, which includes Moranbah, Coppabella and for the period 30 June 2012 to 30 June 2013 to provide a baseline for future change.

Between 30 June 2012 and 30 June 2013, there were 704 offences recorded in the Moranbah Police District, including:

- 593 offences recorded in Moranbah township, of which:
  - 33 offences were against the person - including 27 assaults and 6 other offences against the person;
  - 280 offences were against property, including - 13 car thefts, 125 other thefts, 57 property damage offences, 52 unlawful entry offences, 29 cases of fraud, 2 arsons, 1 offence of handling stolen good and one robbery; and
  - 280 were other offences - 95 traffic offences, 85 good order (e.g. drunkenness) offences, 76 drug offences, 7 liquor offences, 1 weapons act offence and 16 miscellaneous offences;



- to the east of Moranbah, there were an additional 24 offences, including traffic related offences, theft and unlawful entry, an assault, a robbery and another offence against the person;
- to the south of Moranbah, there were 63 offences, principally traffic or property related, but including one assault and a robbery; and
- to the north of Moranbah, 24 offences principally involving offences against property, but including one drug offence and one traffic offence.

Findings from five year trend data (for the period 1 July 2007 to 30 June 2012) are summarised below. This data was provided by Queensland Police Service Statistical Services for Moranbah Police Division, Isaac Regional Council LGA and Mackay Regional Council LGA. The analysis is focused on offences against the person and against property.

For the purpose of comparison, offence rates are expressed per 100,000 persons which have been calculated on the estimated residential population at 30 June of each year.

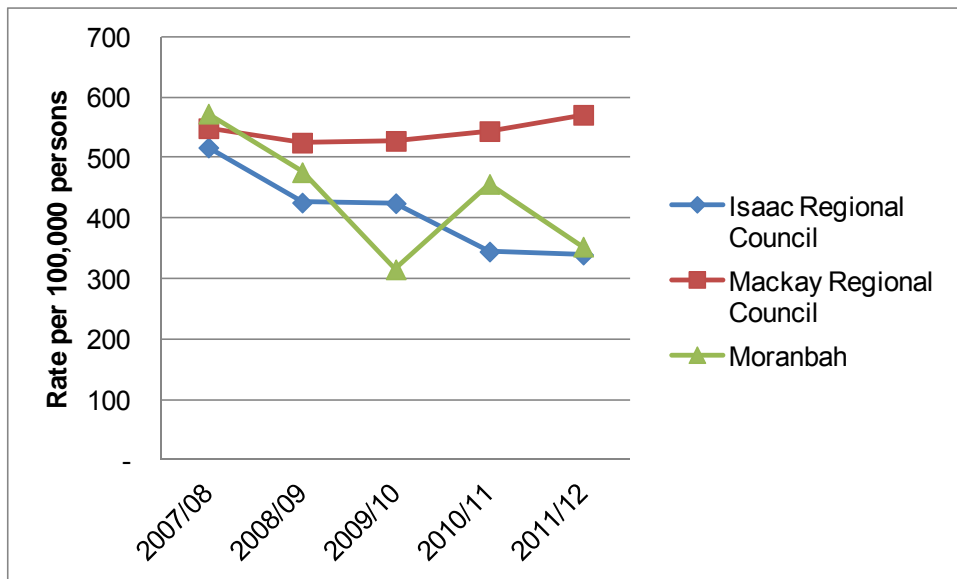
Key findings regarding crime trends in Moranbah:

- The rate of crime in Moranbah including assaults, robbery, sexual offences, offences against property and other offences against people has fluctuated over the five year period, with little discernible or consistent trends;
- Moranbah's rate of offences against people and other offences generally peaked in 2007/08, while offences against property peaked in 2010/11;
- All offence rates in Moranbah are generally trending down in 2011/12 to rates lower than in 2007/08;
- Traffic and related offences peaked in 2008/9 and declined sharply to June 2012;
- A sharp increase in rates of fraud in Moranbah over the five year period. Police in Moranbah attributed this to a 'keeping up with the Jones' factor, i.e. people commit fraud in order to fund desirable purchases in line with the purchases of others;
- A declining rate of sexual offences, with one increase in 2010/11 before rates fell in 2011/12;
- A declining rate of drug offences since its peak in 2009/10; and
- No prostitution offences reported in Moranbah over the last five years.

The following provides a comparison of offence rates according to category for Moranbah Police Division, Isaac LGA and Mackay LGA. A breakdown of the rate of different offences within each category is provided for Moranbah.

Figure 3.10 present findings specific to offences against the person. Figure 3.10 shows:

- Offence rates in Isaac LGA have continued to decline from 517 offences (per 100,000 persons) in 2007/08 to 340 offences in 2011/12;
- Mackay LGA has a consistently higher rate of offences against the person, compared with Isaac LGA; and
- Rates in Moranbah Police Division have fluctuated, over the five year period.

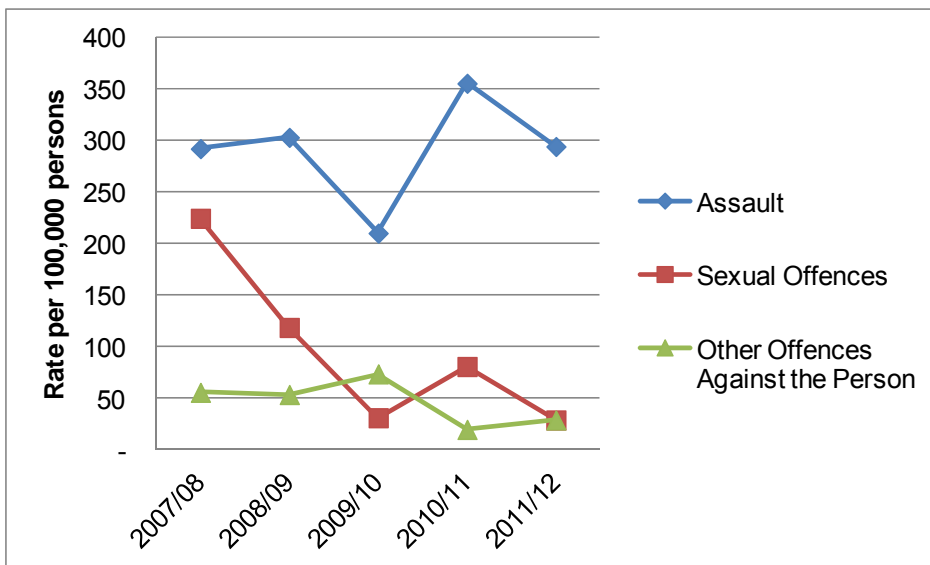


**Figure 3.10 Offences Against the Person, Moranbah, Mackay LGA, IRC LGA 2007-2012**

Source: QPS 2013

The rate of different offences against the person in Moranbah Police Division between 1 July 2007 to 30 June 2012 indicate as shown in Figure 3-11:

- a decline in the rate of sexual offences from a peak of 225 offences (per 100,000 persons) in 2007/08, to 29 in 2011/12, excluding 2010/11 which had a rate of 81 per 100,000 persons; and
- a fluctuating rate of assault offences, declining sharply in 2009/10 to a rate of 210 offences per 100,000 persons, before increasing sharply in 2010/11 to a rate of 355 and declining again in 2011/12.

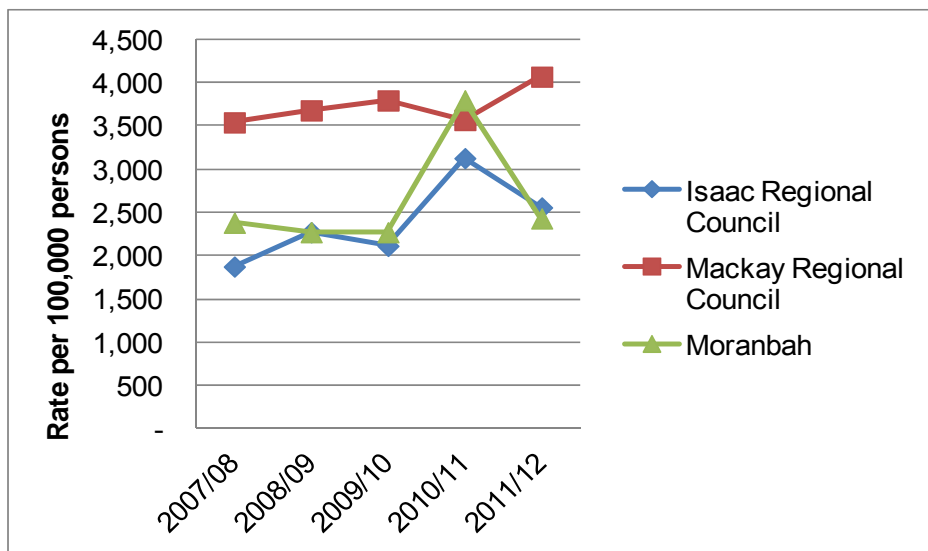


**Figure 3.11 Rate of Offences Against the Person, Moranbah Police Division, 01/07/2007 to 30/06/2012**

Source: QPS 2013

Figure 3.12 presents findings relating to offences against property in Moranbah division and Isaac and Mackay LGA including:

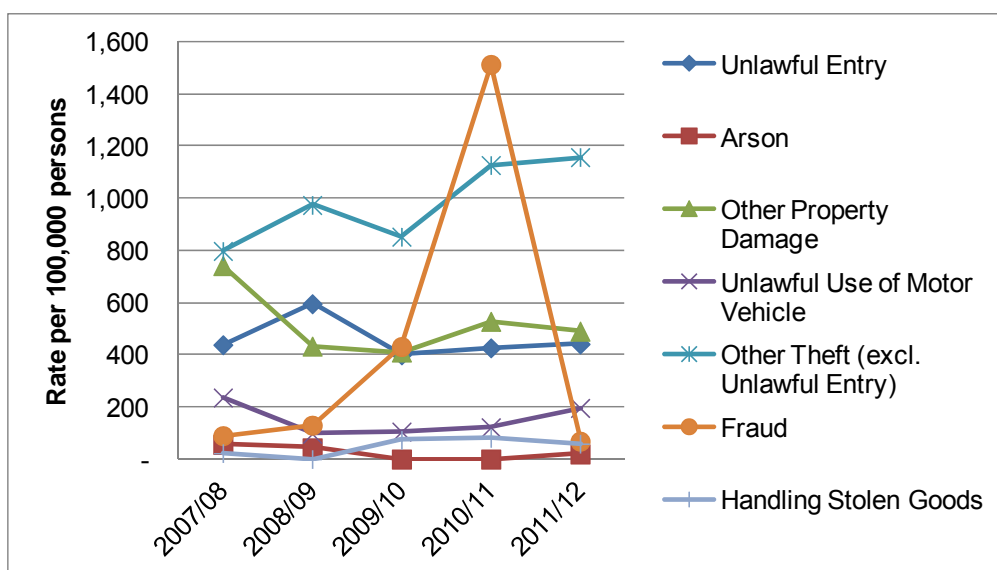
- a higher rate of offence in Moranbah Police Division in 2010/11 with a rate of 3,797 per 100,000 persons, compared with Mackay Regional Council (3,569) and Isaac Regional Council (3,128);
- a consistently higher rate of offences in Mackay LGA and indications of a climbing offence rate from 3,541 (per 100,000 persons) in 2007/08 to 4,069 offences in 2011/12, falling once in 2010/11; and
- the five year trend for Isaac LGA, fluctuates but also indicates a climbing rate of offences against property, while the trend in Moranbah Police Division indicates a declining rate between 2007/08 and 2009/10, with a peak in 2010/11 before falling again to a rate of 2,432 in 2011/12.



**Figure 3.12 Offences against Property, Moranbah, Mackay LGA, IRC LGA 2007-2012**

Source: QPS 2013

Figure 3.13 presents the rate of different offences against property in Moranbah Police Division, indicating general fluctuation over the five year period with few discernible trends.



**Figure 3.13 Rate of Offences Against Property, Moranbah Police Division, 01/07/2007 to 30/06/2012**

Source: QPS 2013

## 3.5 Social Infrastructure and Services

The following sections provide a comparative overview of existing social infrastructure services and facilities in the study area.

Key issues of inadequate social infrastructure provision identified in Isaac LGA by the IRC & ULDA in 2009<sup>7</sup> include:

- demand for affordable housing;
- inadequate supply of land for housing development;
- attracting and retaining non-residents in the community;
- limited employment diversity;
- need for appropriate location of temporary accommodation;
- demand for childcare and kindergarten services;
- demand for health and medical centres and services;
- need for improved emergency response capacity for multiple casualties or responses to airport incidents; and
- need for more police services.

Since 2009, easing of housing costs, BMA's delivery of workforce housing and BMA's investment in the Isaac Affordable Housing Trust have reduced need for affordable housing. Also, local general practitioners have successfully recruited new staff, and they advise the current level of GP services is adequate to demand in Moranbah.

Consultation with service providers in Moranbah indicates that social infrastructure such as schools, training facilities and recreational services are adequate for the current population, however there is ongoing need for maintenance and growth of services such as emergency and supported housing, family support, disability support, and facilities for aged care. Services which rely on volunteers (such as community support services provided by Lifeline and Salvation Army) have not been able to maintain operations due to falling levels of volunteering. Childcare services that accommodate shiftwork are also in need to support women's participation in the workforce.

Health infrastructure is stretched by the cumulative demands of non-residential workforces, as the lack of other after-hours health services means evening presentations tax hospital resources. The hospital has had difficulty attracting and retaining staff due to housing costs, however this is currently less acute with housing rental costs easing during 2012-2013. Key services workers also face vulnerability as they do not have the 'mine salary' or employer support to meet increased living costs.

The following sections detail provision of social infrastructure in Moranbah and where relevant the IRC LGA.

### 3.5.1 Education and training

There are 19 schools listed across the Isaac region. This is just over 20 per cent of the 91 facilities listed for the MIW region. Education facilities in Moranbah are as follows:

<sup>7</sup> Isaac Regional Council 2009, p.9; Queensland Government ULDA 2009

- Kindergarten, pre-school and child care centres (3)
- Primary schools (2); and
- High school (1).

The focus on early childhood education and child care in Moranbah supports young, working families. However, in light of Moranbah's growing population this number is insufficient to sustain the number of families requiring early childhood services. Consultation data suggests local childhood care businesses are closing, due to an inability to retain staff impacted by local accommodation shortages (Elliott Whiteing 2012). Moranbah offers two primary schools and one high school. As children reach high school age, families are motivated to move from Moranbah to access further education.

The MIW Regional Plan identified that a lack of tertiary education facilities in the region can result in young people relying on obtaining employment in the mining industry or leaving the region (Queensland Government, 2012). The Isaac LGA has technical colleges that offer a limited number of courses and programs, with a focus on training for employment in the mining industry.

The following education and training services are currently available in Moranbah or Isaac LGA:

- B and J Hutt Training;
- Civil Safety Training;
- Coalfields Training Excellence Centre;
- Queensland Minerals and Energy Academy (via Moranbah SHS); and
- Sharp Training.

Central Queensland Institute of TAFE has major campus hubs at Emerald and Mackay and identifies itself as the lead provider of training to the mining industry in Queensland. It offers relevant training in skills and competencies required for employment in the mining industry, courses in various trades as well as in areas such as hospitality.

James Cook University is located in the MIW region, based at the Mackay Hospital's Education and Research Centre (MERC). The centre provides a facility for medical and dental clinical placements, and teaching of social work (JCU 2011).

### 3.5.2 Health Services and Facilities

The Isaac region is serviced by three hospitals at Moranbah, Dysart and Clermont. Moranbah Hospital offers approximately 16 beds, providing general medical services including accident and emergency services, admissions, aged care and outpatient services. A range of visiting allied health services are also maintained such as adult, child and youth mental health specialist services; speech pathology; counselling; and radiology. Patients who require treatment beyond basic services are sent to regional hospitals, the nearest being in Mackay.

Health facilities and services in the local study area of Moranbah include:

- General Practitioners (7);
- Moranbah Hospital (1) of approximately 16 beds, compared to three hospitals across the Isaac LGA and 11 across the MIW region;
- A community health service operated from Moranbah Hospital; and
- Allied Health services, operated from Moranbah Hospital.

The Mackay Base hospital offers specialist services that are not provided in Moranbah such as obstetrics and gynaecology, paediatrics, emergency medicine, orthopaedic surgery, anaesthetics, intensive care, coronary care, psychiatry, aged care; renal medicine, ophthalmology, palliative care, and day surgery (Queensland Health, 2011). Trials are underway in Moranbah for specialist service consultation via videoconference, improving access to services and enabling local staff to provide pre and post-op support.

The Department of Health and Ageing (DoHA) considers the ratio of 0.71:1000 as the standard doctor-to-patient ratio, which, compared to Moranbah's estimated<sup>8</sup> 2013 population of 9,330, indicates the need for 6-7 GPs in town.

There are currently 7 GPs in Moranbah, indicating the supply is at an adequate level of capacity for the residential population. Local consultation data supports findings that Moranbah Hospital is experiencing demand on its services as a result of demand from the non-resident working population.

### 3.5.3 Police, Emergency Services and Justice

The Mackay Police District responds covers the MIW region. This district has fewer police officers per population (one police officer for every 556 residents) compared to the entire Queensland area (one police officer for every 410 residents), an imbalance that is likely exacerbated by the significant FTE population across the MIW region (Queensland Police Service, 2013 b). Moranbah Police Station covers the area to Coppabella, halfway to Nebo and halfway to Glenden. There are approximately 14 officers servicing Moranbah.

Consultation identified the difficulty QPS has in attracting in retaining staff in the Moranbah area (given competition for labour from resource companies across Queensland).

The QFRS operates in the IRC LGA through five urban fire stations, which are located at Clermont, Moranbah, Glenden, Dysart and Middlemount.

Police, emergency service and justice services on a local level in Moranbah include:

- Moranbah Police Station;
- Moranbah Ambulance Station;
- Moranbah Fire and Rescue Service; and
- Moranbah Court House, a Queensland Government Agents Service.

The results of consultation with local emergency service providers indicated stable resource numbers for the Fire and Rescue Service and Queensland Ambulance Service, but a constrained resourcing for Queensland Police. Anecdotal accounts suggest the high turnover of QPS recruits to Moranbah is a reflection of State agencies' incapacity to meet the rates and incentives offered by Bowen Basin's mining industries.

<sup>8</sup> 2013 population has been estimated by applying a 2% annual growth rate on the 2011 population of 8,965. OESR's most recent projections are based on 2006 data, and estimated an annual growth rate in Isaac LGA of 3.8%, however this is considered too high for application to the past 2 years.

### 3.5.4 Community and Civic Services

Local community and civic facilities listed in Moranbah include:

- Moranbah Community Centre;
- Moranbah Youth Centre; and
- Moranbah Neighbourhood Centre.

The Moranbah Library and aquatic centre are valued civic facilities and there are a number of local associations and hobby groups, although this represents the extent of entertainment facilities and services.

The Salvation Army currently provides a visiting community service based in Mackay, and Lifeline also restructuring its service provision model and unavailable in Moranbah.

There are no aged care service providers located in Moranbah. Access to aged care is available in Clermont (100kms away), where there are two facilities.

### 3.5.5 Family support

The IRC LGA has a total of 13 early childhood education and care services. The most common early childhood education and care services are long day care services, with five services, followed by school aged care services with three services.

Moranbah offers three early childhood care services. Other family support services available in Moranbah include:

- Moranbah and District Support Services;
- Emergency and Long Term Accommodation in Moranbah;
- Centacare;
- Queensland Government Agent Program; and
- Financial Counselling Service, The Salvation Army Moneycare Program.

### 3.5.6 Recreation and Cultural Facilities

#### 3.5.6.1 Sporting facilities

The most recent facility delivered to Moranbah is the \$5.5 million Greg Cruickshank Aquatic Centre, through a BMA and Isaac Regional Council partnership in early 2012. The aquatic centre represented a major initiative by BMA, Isaac regional council and other industry partners. Other sporting and recreation clubs and organisations found in the community are listed in Table 3.18.

**Table 3-18 Sporting and recreational organisations**

Moranbah
Rugby League, Rugby Union, Australian Rules, Soccer, Bowls, Golf, Skate Park, Hockey, Netball, Basketball, Volleyball, Tennis, Squash, Cricket, Golf, Bowls, Touch Football, Gymnastics, Gymnasium, Boxing Club, Karate, Fishing Association, Darts Club, Motorcycle Riders Club, Speedway Association, Off-road Club, BMX, Horse and Pony Club, Rodeo Grounds, Race Club, Pistol Shooting, Bowhunters and Greg Cruickshank Aquatic centre, which features 50m and heated 25m swimming pools.

Source: DCSG 2011, ULDA 2011b



The Isaac region also benefits from the Dysart Indoor Multipurpose Sports and Recreation Centre, which began construction in late March 2011. The project cost more than \$5 million and was undertaken in a partnership of the Australian Government, Queensland Government, IRC, BMA and Jellinbah Group Pty Ltd.

#### 3.5.6.2 **Arts, culture and amenity**

Moranbah has a cultural and civic centre including the art gallery, library and civic centre. There is also a community radio station.

Isaac Regional Council's Arts and Cultural Policy and Plan 2011-2015 recognise that almost 100% of local arts, culture and heritage is currently managed and presented by volunteers and hobbyists. The Plan has been developed to balance the focus of economic development with other elements of community liveability (social, cultural, environmental). It aims to guide the current and future direction of art and culture at the grass-root, middle management and strategic levels of governance in the Isaac region.

There are a variety of parks and gardens around Moranbah, including Nolan Park on the east side of Moranbah and Binda Park to the west with an undercover playground and a walking trail.

Grosvenor Park, in Moranbah's Town Square features barbeque facilities and playgroup equipment, located centrally to shops, the swimming pool and skate park. Federation Walk can also be accessed from here, which includes fitness circuit equipment.

### 3.6 **Housing**

Key findings of BMA's consultation in 2011/12 included concern about housing and/or accommodation affordability and availability.

The growth of mining in Bowen Basin had increased demand for rental and permanent accommodation for mine workers in the region, therefore reducing the availability of accommodation for families and permanent residents. There was also a lot of interest expressed in how the issue, generally, would be addressed over the long term. Many stakeholders felt that low availability of land was inflating house purchase and rental prices, making it difficult for businesses and services to attract and retain workers. Stakeholders were concerned that the lack of affordable housing leads to overcrowded, communal homes which impact community safety. Updated information on the housing market is included below at Section 4.9.

#### 3.6.1 **Dwelling structure and occupancy trends**

Moranbah, in common with many other resource towns, experiences difficulty maintaining adequate housing supplies for changing population demands. There were 3,198 dwellings counted in Moranbah at the ABS Census. Almost 82% of Moranbah's total private dwellings were occupied in 2011.

Moranbah's Table 3.19 shows comparative data for numbers and types of dwellings.

**Table 3-19 Private dwelling types in the areas of influence**

Occupied private dwelling type	Moranbah		Isaac R LGA		MIW Region		Queensland	
	No.	%	No.	%	No.	%	No.	%
Separate house	2,205	69	5,873	88	46,886	84	1,215,303	79
Semi-detached, row or terrace house, townhouse etc.	252	8	313	5	2,827	5	129,430	8
Flat, unit or apartment	30	1	182	3	4,706	8	181,716	12
Other dwellings	115	4	271	4	1,560	3	19,575	1
<b>Total occupied private dwellings</b>	<b>2,608</b>	<b>82</b>	<b>6,652</b>	<b>76</b>	<b>55,979</b>	<b>86</b>	<b>1,547,303</b>	<b>90</b>
<b>Total private dwellings</b>	<b>3,198</b>		<b>8,751</b>		<b>65,257</b>		<b>1,725,214</b>	

Source: ABS 2011

Of the 2,608 occupied private dwellings in Moranbah, 385 (14.7%) were fully owned, 409 (15.7%) were being purchased, and 1,762 (67.6%) were being rented. This compared with 20.9% fully owned across Isaac region, 14.6% being purchased and 60.8% rented. MIW region has a more even distribution and more closely reflects Queensland averages, with 28.7% fully owned, 33.2% under purchase and 34.5% rented.

The lower rate of home ownership in Moranbah and Isaac region reflects the recent inflation of the housing market, leading to high levels of out-of-town investment in local housing, and the high percentage of properties owned by mining companies and leased to employees.

**Table 3-20 Dwelling tenure types in the areas of influence**

Tenure type	Moranbah		Isaac R LGA		MIW Region		QLD	
Fully owned	384	14.7%	1,389	20.9%	16,062	28.7%	448,617	29.0%
Being purchased <sup>1</sup>	409	15.7%	974	14.6%	18,629	33.2%	533,868	34.5%
Rented <sup>2</sup>	1,762	67.6%	4,041	60.8%	19,360	34.5%	513,415	33.2%
Other tenure type	14	0.5%	99	1.5%	536	1.0%	14,304	0.9%
Not stated	37	1.4%	148	2.2%	1,472	2.6%	37,099	2.4%
	<b>2,606</b>		<b>6,651</b>		<b>56,059</b>		<b>1,547,303</b>	

Source: ABS 2011 (all)

1. includes being purchased under rent/buy scheme
2. including rent free accommodation

### 3.6.2 Housing market

Figures 3.14 and 3.15 provide trend data from 2002 to year to date at 20 May 2013, for 3-4 bedroom house sales and vacant land sales in Moranbah (PDS Live, 2013). These findings have been compared with house and land sale growth in the Isaac region as a whole and in Blackwater as a similar Bowen basin community, for the same period.

The median sales figure for a 3-4 bedroom house in Moranbah over the period 2002-May 2013 was \$400,000, for a property of 809m<sup>2</sup>. This was \$100,000 more than the median sale price across Isaac region (\$330,000), which was based on the larger property area of 892m<sup>2</sup>. It is also a higher sales

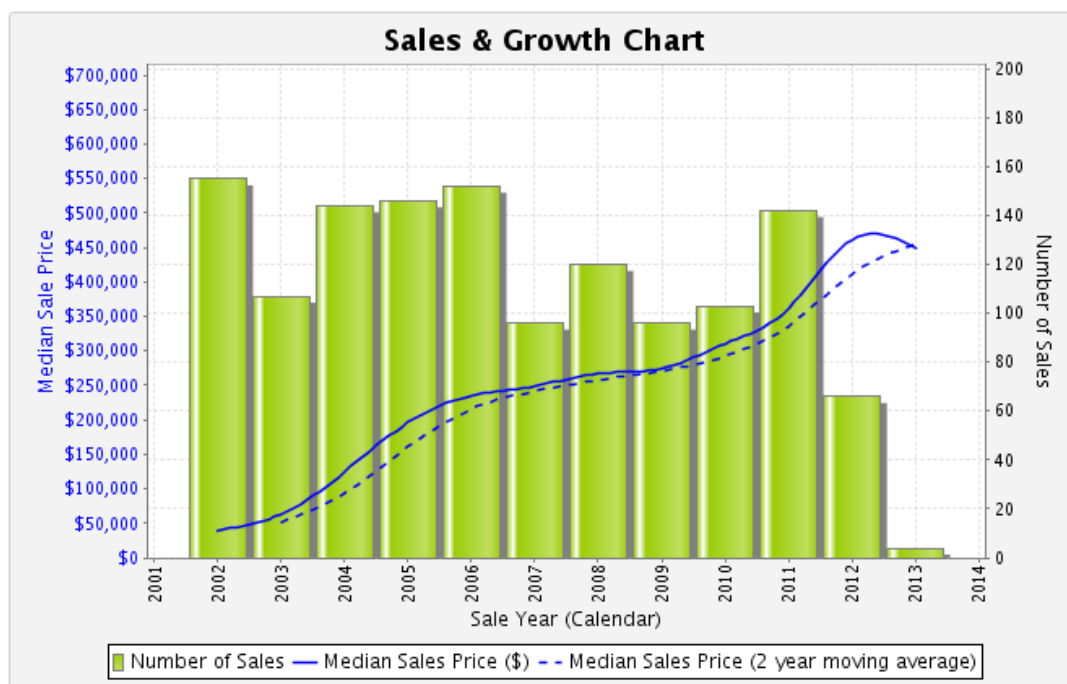
median than recorded for Blackwater and Mackay over the same period (\$230,000 for 708m<sup>2</sup> and \$357,000 for 800m<sup>2</sup> respectively). This indicates that house prices in Moranbah have generally been higher than their comparators over the ten year period.

The median cost of 3-4 bedroom houses in Moranbah increased sharply from 2002 (with a median sale of around \$100,000) to nearly \$400,000 in 2006, before plateauing and rising more gently to more than \$450,000 in 2009. During 2010 and 2011, there was sharp spike in housing costs to a median of almost \$800,000, which declined sharply in 2012, to a median of around \$540,000 in March 2013 (see Figure 3.14).

By comparison, the number of sales in Blackwater peaked in 2002, showing general fluctuation over the ten years, plus the first five months of 2013, with spikes over 2004-06 and 2011 (see Figure 3.15). Blackwater’s sales declined in 2012, in line with the trend in Moranbah. The median sales price in Blackwater for the period 2002-2013 (\$230,000) was almost half the median sales price in Moranbah for the same period.



Figure 3.14: 2013 Sales & Growth, 3-4 Bedroom House, Moranbah



**Figure 3.15 YTD 2013 Sales & Growth, 3-4 Bedroom House, Blackwater**

### 3.6.3 Rental costs

Rental costs in Moranbah rose steeply between 2007 and 2012, to reach highly inflated rates. In March 2012, when the median rental cost of a three bedroom house in Moranbah was \$2,000, compared to IRC’s median of \$1,000/week (partially reflecting Moranbah’s high rents). Moranbah’s housing was cited in numerous statistical and media reports as having some of the most expensive rental costs in Australia.

However, the past 12 months (2012-2013) has seen a major change in the cost of rental housing in Moranbah and other Bowen Basin towns (see Figure 3.15). The following data were derived from Residential Tenancy Authority data accessed 15 May 2013, with Moranbah and Blackwater provided as examples over a 13 month period.

From March 2012, the cost of rental housing in Moranbah plunged, and rents declined sharply across the board for the next twelve months (with the exception of a small June 2012 peak in rental costs for 2 bedroom units). As an example:

- the median rent for a 4 bedroom house in March 2012 was \$2,600 and by March 2013, was \$650 (or less than 25% of the March 2012 level); and
- the median rent for 3 bedroom units and houses decreased by 64% (to \$600) and 77% (to \$650) respectively.

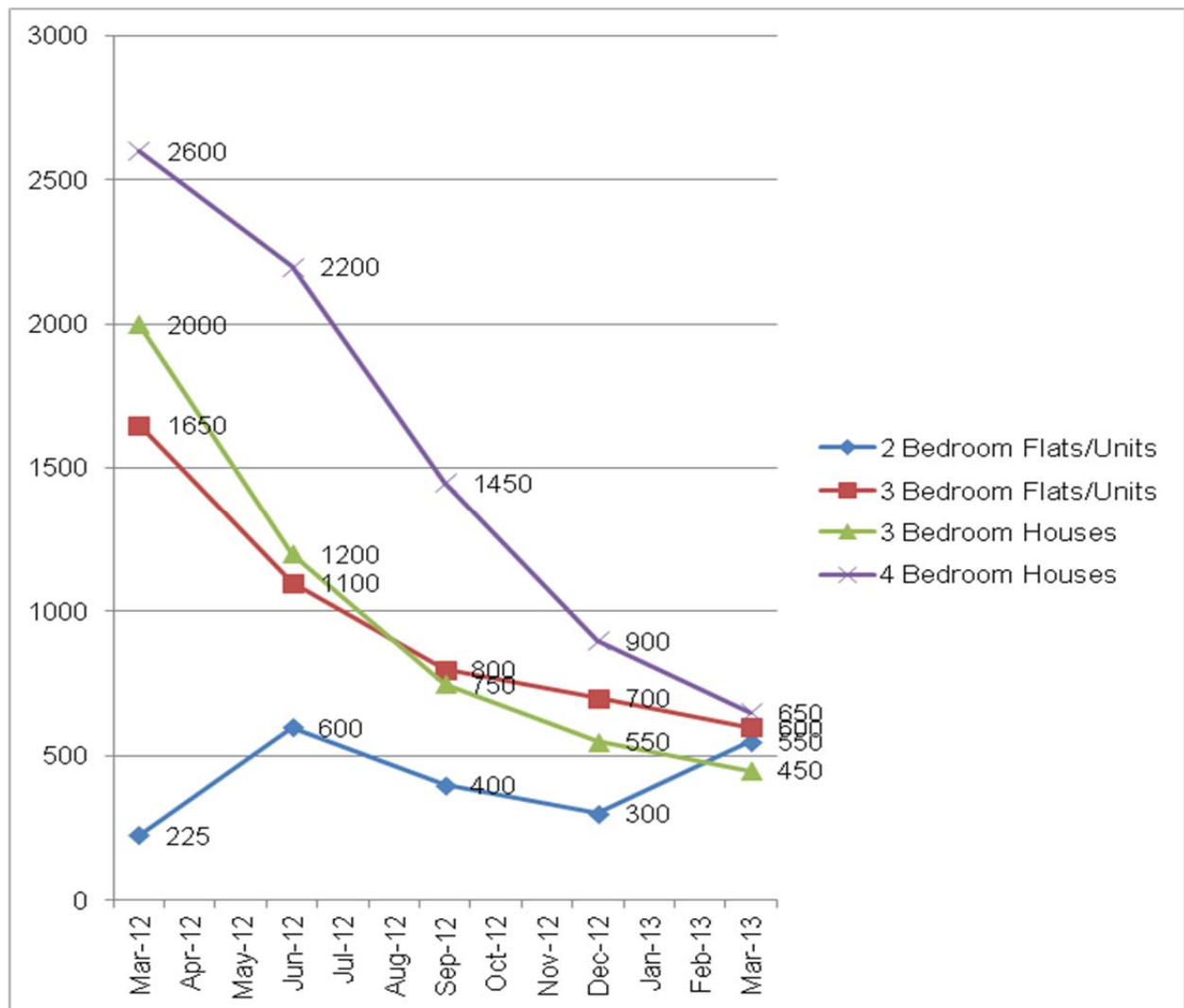
These rates are generally consistent with Isaac region (\$600 and \$550 respectively) for the same quarter, but still higher than the Mackay LGA averages of \$460 and \$530 respectively.

Interestingly, rental prices for all housing types in Moranbah as at March 2013 were clustered in a band from \$450 to 650/week, compared to the disparity between \$225 (for 2 bedroom units) and \$2,600 (4 bedroom houses) in March 2012 (see Figure 3-16).

The change in housing prices over the past 15 months is attributable to the following factors:

- an increase in housing supply due to construction of housing by BMA and release of the ULDA’s Bushlark Grove land and housing packages;

- BMA having instituted a rent control policy in 2012, whereby excessive rents were negotiated down to more affordable levels;
- a decrease in speculative housing purchase for rental during 2012, as household and bank financing tightened;
- development of the BMA Accommodation Village to ensure workers were accommodated without stressing local housing stocks; and
- the mid- 2012 downturn in the coal industry and decreased demand for housing.



**Figure 3.16 Median rental costs, Moranbah March 12 – March 13**

Table 3.21 provides a detailed summary of the median weekly rents in Moranbah and IRC for the past five quarters to March 2013.

Blackwater has showed a similar recent trend to more affordable rents, through from lower 2012 levels. Median rent for a 3 bedroom house in Blackwater was \$750 in March 2012 and by March 2013 had fallen to \$400. Median rent for a 4 bedroom house in Blackwater fell from \$1100 in March to \$600. In addition to slowing coal industry growth, the decrease in rental cost was partly in response to the construction of new housing as part of Urban Development Authority projects in Blackwater.

**Table 3-21 Median weekly rents for Moranbah and the IRC LGA**

Locality	Mar-12		Jun-12		Sep-12		Dec-12		Mar-13	
	Rent (\$)	New Bonds	Rent (\$)	New Bonds	Rent (\$)	New Bonds	Rent (\$)	New Bonds	Rent (\$)	New Bonds
<b>2 Bedroom Flats/Units</b>										
Moranbah	225	8	600	17	400	10	300	8	550	24
IRC LGA	250	15	350	21	450	26	300	12	550	33
<b>3 Bedroom Flats/Units</b>										
Moranbah	1650	14	1100	11	800	11	n.a.	2	600	16
IRC LGA	1000	34	900	15	800	13	n.a.	4	600	19
<b>3 Bedroom Houses</b>										
Moranbah	2000	54	1200	42	750	84	550	73	450	80
IRC LGA	1700	92	1100	74	700	141	500	129	425	125
<b>4 Bedroom Houses</b>										
Moranbah	2600	43	2200	43	1450	65	900	43	650	43
IRC LGA	2000	74	1800	58	1200	87	650	75	550	64

Source: RTA 2013

n.a = Not available (the number of new bonds lodged was too small to provide a reliable estimate)

Note: Where the number of new bonds lodged is small, the rent value should be used with caution

\* This figure is adjusted to remove head lease bond lodged.

Rental costs are now at a five year low in Moranbah. Given the factors contributing to the decrease (increased stock included significant investment by BMA and development facilitation by EDQ, rent control and less speculative investment) it seems unlikely rental costs in Moranbah and Blackwater will return to 2011-12 levels in the next five years, however this will be dependent on careful management of the cumulative housing demands of the mining industry in the region.

As at mid June 2013, there were approximately 180 dwellings advertised for rent in Moranbah on realestate.com.au. Dwellings included approximately 140 houses and 40 units

At June 2013 there were approximately 160 houses listed for sale in Moranbah, with prices ranging from \$300,000 to \$800,000.

There were only 8 units, townhouses and apartments listed as available for purchase, with prices ranging from \$400,000 to \$675,000. This indicates a limited supply of smaller and detached homes for purchase.

### 3.6.4 Short-term accommodation

Short-term, temporary accommodation facilities in Moranbah consist of six hotels/motels and two caravan parks:

- Moranbah Motor Inn;
- Moranbah Drivers Rest Motel;
- Black Nugget Hotel/Motel;
- Moranbah Outback Motel;
- Western Heritage Motel;

- Moranbah Isaac Hotel;
- Coal Country Caravan Park; and
- Moranbah Caravan Village.

Short-term accommodation is primarily used for accommodation of contractors, sales businesses public service and social services staff. Block bookings are common, to accommodate multiple and extended stays. The availability of short term accommodation in Moranbah has been extremely limited by this demand over the past few years (with prices exceeding the cost of coastal hotels and motels).

### 3.7 Summary of baseline indicators

Social values and conditions identified through consultation, research and analysis are summarised in Table 3.22, along with an estimation of their current status (at June 2013).

**Table 3-22 Baseline indicators of local and regional settlement patterns**

Social condition / value	Status
<b>SETTLEMENT PATTERNS</b>	
Properties near the Project site	<ul style="list-style-type: none"> <li>• Two properties (one landowner) directly affected by Project.</li> <li>• Five properties potentially indirectly affected (adjacent to or within 10 kms).</li> </ul>
Local land owner values	<ul style="list-style-type: none"> <li>• Existing uses in the immediate area include grazing and rural uses.</li> <li>• Social values include homes, businesses (principally grazing) and family heritage.</li> </ul>
Local and regional settlement patterns	<ul style="list-style-type: none"> <li>• Mining activity has existed in this region for more than 40 years.</li> <li>• Local connector roads are heavily trafficked and in poor condition in places.</li> <li>• Moranbah Airport was recently upgraded.</li> </ul>
<b>SOCIAL AND CULTURAL VALUES</b>	
Indigenous values	<ul style="list-style-type: none"> <li>• Key issues include securing opportunities for Indigenous business development, and training and employment opportunities.</li> <li>• Concerns raised in consultation about potential for erosion and subsidence to impact on native flora and fauna or places of cultural heritage.</li> </ul>
Local and regional values	<ul style="list-style-type: none"> <li>• Local and regional values centred on families, school communities, community participation and events, recreation, and employment in mining and related industries.</li> </ul>
Community participation	<ul style="list-style-type: none"> <li>• Community participation has been affected by mining shift rosters and volunteer resources have declined in the past 3-5 years.</li> </ul>
<b>DEMOGRAPHIC CHARACTERISTICS</b>	
Population size and growth	<ul style="list-style-type: none"> <li>• Moranbah's resident population in 2011 was 8,990, non-resident population of ~4,585 contributing to an overall FTE population of 13,575.</li> </ul>
Gender diversity	<ul style="list-style-type: none"> <li>• Moranbah's 2011 resident population was 55.49% male and 45.51 female (4,988 males).</li> </ul>



Social condition / value	Status
Vulnerable Groups	<ul style="list-style-type: none"> <li>Likely vulnerable population groups in the area include Indigenous people, women and children.</li> </ul>
<b>COMMUNITY HEALTH AND SAFETY CHARACTERISTICS</b>	
Cost of living	<ul style="list-style-type: none"> <li>In 2010 the cost of living as defined by the 'basket of goods' index in Moranbah was 13.9% above Brisbane.</li> <li>Average incomes in Moranbah were above the Queensland average in 2011 and this is expected to be maintained.</li> </ul>
Advantage and disadvantage	<ul style="list-style-type: none"> <li>2011 SEIFA Index indicates higher than average levels of socio-economic advantage (in the 8th decile) in Moranbah.</li> </ul>
Health indicators	<ul style="list-style-type: none"> <li>Belyando Shire (2010) compared to other former shires in the Isaac LGA had lower self-assessed health status of fair/poor, lower rates of delayed medical consultation, higher rates of unpaid voluntary work.</li> <li>Perceptions of safety walking alone after dark were modelled as higher in Broadsound and Nebo Shire compared with Belyando Shire.</li> </ul>
Community safety	<ul style="list-style-type: none"> <li>Community concern expressed about violence and community safety in Moranbah during 2013.</li> <li>Community members' concerns include road safety, in town and on local connector roads.</li> </ul>
	<ul style="list-style-type: none"> <li>Crime data indicate no worsening of crime in Moranbah over the past five years, and a decline in some offence rates.</li> </ul>
	<ul style="list-style-type: none"> <li>Local emergency service capacity for responses to multi-vehicle accidents, bus accidents or air traffic accidents is less than optimal.</li> </ul>
<b>TRAINING, EMPLOYMENT AND LOCAL BUSINESSES</b>	
Education and training	<ul style="list-style-type: none"> <li>A range of local and regional training organisations are available to support increased training and capacity development initiatives.</li> </ul>
	<ul style="list-style-type: none"> <li>Moranbah includes 3 primary schools, 1 high school and continues to have unmet demand for childcare services.</li> </ul>
Opportunities for local businesses	<ul style="list-style-type: none"> <li>Community concerns exist that commute workforces don't spend locally to the same extent as resident workers.</li> <li>BMA Local Buying (BLBP) Program has increased local supply options.</li> </ul>
Labour force	<ul style="list-style-type: none"> <li>Workforce participation in the Moranbah area is high, particularly for men.</li> </ul>
Employment diversity and other characteristics	<ul style="list-style-type: none"> <li>Lower rates of overall educational attainment, female labour force participation and occupational diversity in Moranbah.</li> </ul>
Skill shortages	<ul style="list-style-type: none"> <li>The number of occupations in shortage nationally was at its lowest since 2007 at last report in 2012.</li> <li>Major shortages still exist for technicians and trades workers and machinery operators and drivers which are prevalent occupations in Moranbah and Isaac LGA.</li> <li>Moranbah businesses have difficulty attracting and keeping workers in all occupational areas due to the higher salaries available in the mines.</li> </ul>

Social condition / value	Status
<b>SOCIAL INFRASTRUCTURE AND SERVICES</b>	
Health Services and Facilities	<ul style="list-style-type: none"> <li>• Moranbah Hospital has limited capacity to meet the demand of non-resident workers.</li> <li>• GP services in Moranbah currently have adequate capacity but will need to recruit additional doctors to keep up with any increases in non-resident workforce demand.</li> <li>• BMA has an existing service arrangement with a local medical firm.</li> </ul>
Police, Emergency Services and Justice	<ul style="list-style-type: none"> <li>• Moranbah and Isaac region's emergency services have limited capacity to service their geographic region, as staffing levels are generally calculated on the resident population, and non-resident workers may increase the load by up to 50%.</li> </ul>
Community and Civic Services	<ul style="list-style-type: none"> <li>• Moranbah's community and civic services such as counselling, financial counselling and referral to support services have limited capacity for an increased population, but services report negligible demands from non-resident workers.</li> </ul>
Recreation and Cultural Facilities	<ul style="list-style-type: none"> <li>• Moranbah has a good level of recreational facilities.</li> <li>• The cumulative increase in non-local residents has resulted in some increases in demands for sporting fields and some concerns about behaviour at sporting events.</li> </ul>
<b>HOUSING</b>	
Housing availability and purchase costs	<ul style="list-style-type: none"> <li>• Housing affordability is a key concern creating pressure on low income families, young families and non-mining businesses seeking workers.</li> <li>• At the time of assessment, Moranbah rental housing prices were above state and regional averages, but significantly more affordable than in the previous three years.</li> <li>• Rental prices for all housing types in Moranbah as at March 2013 were clustered in a band from \$450 to \$650/week.</li> <li>• Moranbah's housing market is likely to experience ongoing fluctuations along with changes in mining growth plans.</li> </ul>
Dwelling structure and occupancy trends	<ul style="list-style-type: none"> <li>• Stakeholders have raised concerns that the lack of affordable housing in Moranbah leads to overcrowded, communal workers' homes, which impact on neighbourhood amenity and community safety.</li> </ul>

## 4. Impacts, Opportunities and Mitigations

This section summarises the likely social impacts of the GRM incremental expansion and the RHM expansion option and proposes appropriate mitigation strategies, and identifies opportunities and strategies to enhance potential benefits.

This section describes, for each key social factor specified in the ToR:

- potential impacts and opportunities;
- relevant local, regional and State initiatives;
- BMA’s relevant existing strategies and management practices;
- the likelihood of the impact or opportunity occurring;
- project-specific mitigations indicated; and
- the desired social outcomes.

Consideration of the associated potential cumulative impacts at Section 4.10.

### 4.1 Evaluation of likely and significant impacts

Evaluation of the risk of impacts was undertaken as follows:

- the baseline section was summarised to provide a picture of existing and likely future conditions;
- vulnerabilities were identified (e.g. housing market, and concerns about community values);
- potential impacts were described, and identified as relevant to construction, operations or both; and
- the likelihood of the impact occurring was considered, given existing Local and State Government commitments, BMA Strategies and Project specific Commitments.

The consequence of the impact was assessed, using the SIA Guideline (Table 4.1).

Impacts and opportunities identified as of medium or high likelihood, and of major or significant consequence, are discussed in this assessment.

**Table 4-1 Consequence Table – SIA Guideline**

Opportunity/Impact/Consequence				
Incidental	Minor	Significant	Major	Severe
Local, small-scale, easily reversible change on social characteristics or values of the communities of interest or communities can <u>easily adapt</u> or cope with change. Local small-scale opportunities that the community can readily pursue and capitalise on.	Short-term recoverable changes to social characteristics and values of the communities of interest or community has <u>substantial capacity</u> to adapt and cope with change. Short-term opportunities	Medium-term recoverable changes to social characteristics and values of the communities of interest or community has <u>some capacity</u> to adapt and cope with change. Medium term opportunities.	Long-term recoverable changes to social characteristics and values of the communities of interest or community has <u>limited capacity</u> to adapt and cope with change. Long term opportunities.	Irreversible changes to social characteristics and values of the communities of interest or community has <u>no capacity</u> to adapt and cope with change.

## 4.2 Existing initiatives and commitments

The following sub-sections list the current Local and State Government commitments, BMA Strategies and Project-specific commitments with influence on the likelihood and significance of the Project's social impacts.

### 4.2.1 Local and State Government commitments

Local and State Government commitments with relevance to this impact assessment are:

- Queensland Government draft Guide to Social Impact Assessment, with preference for an outcomes-focussed approach to social impact mitigation;
- Queensland Government's Regional and Resource Towns Action Plan;
- Queensland Government endorsement of QRC's Local Content Policy; and
- Queensland Government education, employment and training policies.

Local and regional planning outcomes are detailed in Section 3.1 of the baseline. The anticipated contributions and challenges to desired planning outcomes are as follows.

Given timing for the delivery of GRM incremental expansion and the RHM expansion option is uncertain, it is recommended that 12 months prior to construction, BMA engage with the Queensland Government and industry stakeholders to ensure mitigation and enhancement strategies remain aligned with current policy objectives and initiatives.

**Table 4-2 Project contributions to local and regional planning outcomes**

Policy	Project contribution
<b>SDPWO Act 1971</b>	This assessment has been undertaken to address the Terms of Reference as provide by DSDSIP.
<b>SIA Guideline and Policy</b>	This SIA applies the principles outlined in the Guideline, including: <ul style="list-style-type: none"> <li>■ a risk-based approach;</li> <li>■ an outcomes focused mitigation and monitoring framework; and</li> <li>■ innovative solution to capitalise on social opportunities and mitigate detrimental impacts.</li> </ul>
<b>Regional and Resource Towns Action Plan</b>	<p>Actions identified for the Moranbah area in the RART Action Plan were focussed on increasing the supply of land for housing, and managing multiple issues constraining land development for residential, commercial and other purposes. Concept planning and feasibility assessment of Town Centre Rejuvenation projects were also a focus.</p> <p>There is likely to be negligible impacts on housing demand (see section 4.9). The Project site is in close proximity to existing mining uses, with a marginal impact on agricultural land use, and no impact on residential land.</p>

Policy	Project contribution
<b>Royalties for Regions</b>	<p>Royalties for the Regions allows resource proponents to make financial contributions to its funding pool for projects that would mitigate their social impacts. In addition, the program strongly encourages contributions from industry to projects submitted by local government for funding.</p> <p>BMA's current discussions with IRC are focussed on improvements to road infrastructure. BMA is also investing in youth and community facilities (to a total of \$5.5million) and affordable housing (\$1.5 million, in addition to an investment of \$3.5 million in 2012) in the next few years.</p> <p>The Project owners will need to evaluate social impacts in the context of Royalties for Regions priorities and RART Action plans for Moranbah and Isaac prior to Project construction, to identify to shared priorities (e.g. supporting local business vitality, recreational or road infrastructure development, or land for commercial and industrial services).</p>
<b>Education, Training and Employment Policies</b>	<p>BMA is working closely with Queensland Government through the QRC to increase Indigenous participation in the work force through the Bowen Basin MOU as well as the Solid Partners Solid Futures initiative for excellence in Aboriginal and Torres Strait islander early childhood, education, training and employment 2013-2016.</p> <p>BMA also participates in the Queensland Government's Women in Resources Strategy, through the QRC's Women in Mining and Resources Queensland, with a focus on increasing female participation in the resources sector, and with the Queensland Minerals and Energy Academy's Gateway Schools Program.</p> <p>BMA will consult Queensland Government's Department of Education, Training and Employment and relevant training providers 12 months prior to construction to ensure its strategies align with skill priority areas.</p>
<b>Mackay, Isaac and Whitsunday Regional Plan 2012</b>	<p>The purpose of the plan is to 'manage regional growth and change in the most sustainable way to protect and enhance quality of life in the region'. The plan recognises the mining industry as a key regional strength, and also recognises the challenges of providing social and physical infrastructure, including housing, for communities growing as a result of mining development.</p> <p>In terms of regional planning outcomes, the Project:</p> <ul style="list-style-type: none"> <li>■ contributes to the longevity of mining as a key regional strength;</li> <li>■ avoids impacts or constraints on residential or commercial land, and minimises impacts on local character;</li> <li>■ achieves synergies through its location with respect to infrastructure provision (e.g. water and electricity); and</li> <li>■ contributes to cumulative demand for transportation, health and emergency.</li> </ul> <p>The Project will also contribute to providing significant economic and diversified employment opportunities for the MIW Region and will manage the impact of new workers to the region through appropriate accommodation strategies. The Project is therefore considered to be consistent with the vision of the Regional Plan.</p>

Policy	Project contribution
<b>Isaac Region 2020 Vision</b>	<p>The Community Plan includes a focus on housing availability and affordability, social infrastructure and service provision, and diversifying the Isaac economy.</p> <p>BMA has supported Moranbah's current priorities by funding for recreational and community centre, investing in housing, developing its Local Buying program, and supporting planning for health services in the Moranbah region.</p> <p>It is likely the Community Plan will be renewed around the time of the estimated construction period. Engagement with stakeholders prior to construction will be required to identify opportunities for investment as part of BMA's Community Development strategy.</p> <p>There is also potential for BMA to work with the Government and other project proponents to ensure cumulative impacts and benefits are addressed in the context of the community plan.</p>

#### 4.2.2 BMA Strategies

BMA has a well-developed set of corporate programs which include:

- community development, co-operation with local communities and industry partners, the Five Year Communities Strategy, and significant community investments;
- economic development, BLBP and support for a range of training initiatives;
- Indigenous Engagement, through the Indigenous Engagement Strategy, Indigenous training and recruitment, cultural heritage management, and Indigenous Business Development;
- workforce development strategies, at local regional and state level; and
- support for local values, including the Workforce Code of Conduct, matched giving and volunteer programs, participation in local sporting and cultural events, and complaints procedures.

BMA also has a comprehensive community and stakeholder engagement program, ranging from regular formal meetings with the IRC, to the Moranbah BMA Community Network, and range of interactions between BMA Community Liaison officers, individuals, and groups.

As this social impact assessment is based on a Project scenario which assumes the commencement of construction in 2020 and commencement of operations in 2022, it is anticipated that some current policies, initiatives and strategies will change over time. The status of local, State and BMA initiatives, and of the social baseline, will need to be reviewed prior to construction, in order to adapt mitigation strategies to current circumstances as discussed in following sections.

Existing BMA strategies designed to avoid or mitigate impacts of BMA projects are outlined below. Specific strategies to mitigate social impacts and maximise opportunities are outlined in each section as relevant, and summarised in Section 5.

##### 4.2.2.1 Workforce Development

BMA undertakes a number of strategies to strengthen the skills base and availability of labour for project construction and operations. BMA's current strategies include school and industry based training partnerships across the Bowen Basin, structured training through traineeships and apprenticeships, and strategies to increase Indigenous people's employment opportunities in BMA operations. BMA is also facilitating training and trade qualifications for local young people through its support for the Coalfields Training Excellence Centre (CTEC) in Moranbah.

For the construction phase, an engineering, procurement, construction management (EPCM) contractor is likely to be appointed and will coordinate across construction contractors to manage the demand for

tradespeople over the course of construction. To facilitate opportunities for training and employment of local people, the EPCM contractor is likely to require liaison Construction Skills Queensland and the Department of Education, Training and Employment.

For operations, BMA will co-ordinate direct employment of apprentices and trainees. As an indication, BMA currently has 49 apprentices and 22 traineeships across the Bowen Basin, many of whom are recruited locally. BMA is also committed to ensuring all aspects of workplace diversity are addressed throughout operations, including:

- ensuring the workforce is representative of the gender, ethnicity, abilities and age of communities;
- ensuring the workforce has a wide range of experience, capability, beliefs and perspectives that influence the organisation; and
- providing equal opportunity, where everyone is encouraged to be the best they can be, and recognised for it.

BMA's Employment Diversity strategy applies to BMA's new projects. Prior to commencement of construction, BMA will establish targets for female and Indigenous workforce participation. BMA would also commit to undertaking training and recruitment strategies to significantly increase the number of workers who are new entrants to coal mining.

#### 4.2.2.2 **Accommodation Village**

BMA will develop the Red Hill Accommodation Village as part of the RHM expansion option to avoid local housing impacts. Rooms will be made available for all BMA and contracted workers. An Accommodation Village Management Plan (AVMP) will be finalised prior to village operation, and will include:

- workforce well-being and facility provision;
- engagement with local services including Queensland Police Service, Fire and Rescue and Ambulance Services;
- management of behaviour in the accommodation villages;
- gender and cultural issues; and
- the complaints management procedure.

The accommodation village will also support BMA's commitment to maintaining the health and well-being of its workers and contractors' workers. Health facilities and service provision for all persons accommodated by BMA in relation to the GRM incremental expansion and the RHM expansion option will include access to a health clinic, gyms, outdoor recreation space, and social meeting places, Employee Assistance Program for counselling and emotional health issues, and regular health promotion programs.

#### 4.2.2.3 **Workforce Management**

BMA's Workplace Conduct Policy requires all workers to treat others in the workplace with courtesy, dignity and respect, both at work and outside of work. The Workplace Conduct Policy provides clear guidelines to follow concerning conduct. Recruitment of workers will occur across a range of age, gender and other groups to promote balance and positive behaviour amongst the workforce.

Expectations of behaviour in town, and respect for local values, will be made explicit in on-boarding and induction programs for the Project. Compliance with the EPCM's 'Work Rules' (for construction, outlining expectations of behaviour) and BMA's Workplace Conduct Policy (for operations) will be required.



Workers demonstrating behaviour that does not comply with the company requirements will face disciplinary action in line with the terms of their employment.

BMA will ensure both workers and local residents are aware of commitment to respect local values. Strategies for both construction and operations include:

- providing induction training and a welcome pack to workers including local the importance of respecting Moranbah as a family-friendly town and expected standards of behaviour; and
- providing information to the local community about BMA's expected standards of behaviour, and access to its complaints mechanism.

#### 4.2.2.4 **BMA's Local Buying Program (BLBP)**

BMA has committed to the Queensland Resource and Energy Sector Code of Practice for Local Content 2013, administered by the QRC.

BLBP is a targeted program providing opportunities for small businesses to competitively supply goods and services to BMA and its operations throughout the Bowen Basin. As noted in Section 3.4 the large majority (93.9%) of businesses in the Isaac region employ less than 20 staff.

BLBP targets businesses with less than 25 full-time employees, registered or operating as their primary place of business in the townships of Moranbah, Dysart, Blackwater, Emerald and Nebo. Further detailed information is available at <http://c-res.com.au>. In partnership with the Mackay Whitsunday Regional Economic Development Corporation (REDC), BMA has also developed the C-Res (Community Resourcing) foundation, to support delivery of BLBP.

The Local Buying Program results from the first 12 months (to mid 2013) include:

- More than 300 approved C-Res Suppliers (of whom 190 are new suppliers to BMA/BMC);
- More than 830 work opportunities made available to local businesses;
- \$12.38M worth of approved work packages; and
- more than \$170,000 allocated to the Local Buying Community Foundation.

#### 4.2.2.5 **Community Development Strategy**

BMA's Community Development Strategy includes current BMA community support activities and proposed further activities for 2011-2016. The Strategy's current focus is on strengthening the social resources including:

- quality education and training, employment choice, and adequate incomes;
- community, recreational and health facilities which support personal and family health;
- community cohesion, including shared values and positive community relations; and
- a healthy environment and good public amenity.

BMA's Community Development Program (reviewed annually) includes a Community Partnership Program (CPP) which supports regional community programs, with current priorities including youth development, economic development, community development and welfare; community safety, sport, wellbeing and recreation, and cultural development.

Strategies are developed for five year terms, so the 2017-2021 strategy will include engagement and social investment projects that address current social conditions, and are relevant to the potential impacts and opportunities associated with the GRM incremental expansion and the RHM expansion option.

#### 4.2.2.6 Community Safety

Community safety is a core value for BMA, and is addressed through:

- workforce management;
- accommodation village rules and management;
- co-operation with local Police services;
- the complaints process;
- support for community development initiatives; and
- monitoring, with the BCN and QPS.

### 4.3 Settlement Patterns

#### 4.3.1 Directly affected properties

The Project's social baseline identified one land owner directly affected by the Project. BMA's consultation with the land owner indicates that the proximity of Project operations and the accommodation village to homesteads is a concern, as are the impacts of Project construction and operations on grazing activities, the potential impacts of subsidence on homesteads and general property, and the potential for increased noise and litter.

BMA is committed to good faith engagement and negotiation with directly affected land owners in accordance with the relevant legislation and the Queensland Government's Land Access Code (2010). BMA is in discussions with the directly affected landholder to either acquire or access the properties long-term. If the land owner chooses to sell their property, they would likely experience a sense of disruption, loss and the stress of re-establishing elsewhere, however the terms of the settlement would support them in doing so.

The effect of transforming the land use from grazing to mining is not considered significant in terms of broader land use and settlement patterns.

In the context of existing policy and practice commitments by Queensland Government and BMA, the impacts that remain of or above a medium likelihood and significant consequence include:

- interruption of land management, business and livelihood (including on-farm employment); and
- potential displacement and loss of social / family connectivity.

Table 4.3 outlines the existing government and BMA strategies in place to address impacts to directly affected properties.

**Table 4-3 Existing policies and commitments**

Local/State Policy Initiatives	BMA Strategies	Project EIS Strategies
<ul style="list-style-type: none"> <li>• Land Access Code 2010</li> <li>• Land Act 1994</li> <li>• Environmental Protection Act 1997</li> </ul>	<ul style="list-style-type: none"> <li>• Stakeholder and Community Engagement Plan</li> <li>• BMA monitors and mitigates noise and land use impacts through existing noise and environmental management plans</li> </ul>	<ul style="list-style-type: none"> <li>• Noise Management Plan</li> <li>• Environmental Management Plan</li> <li>• Air Quality Management Plan</li> </ul>

Mitigation strategies for social impacts include:

- Compliance with the Land Access Code, including land access and acquisition agreements which ensure land owners' needs and expectations of are considered, and
- Regular communication with the land owner regarding construction plans and potential impacts, the effectiveness of mitigation strategies (e.g. dust management), and resolution of any complaints.

Recognising the likelihood of impacts, it is recommended that baseline conditions are documented as part of land access or acquisition negotiations, including:

- the extent of property management and business operations (including livelihood of owners and on-farm employers); and
- individual land owner concerns regarding potential displacement and loss of social/ family connectivity.

The desired social outcome if these impacts are effectively managed through construction and operations will involve reaching a satisfactory, mutual agreement with land owners for the Project's terms of land access or acquisition.

This outcome will require regular, ongoing and transparent engagement between BMA and directly affected land owners. Land owner satisfaction with the process of negotiation and land access will be actively monitored through agreed performance indicators on an annual basis throughout Project construction and for the first two years of mine operation.

#### 4.3.2 Properties nearest the Project site

Two privately-owned and occupied dwellings are identified within 10km of the Project. These properties represent value as homes and temporary workers' accommodation, as businesses (principally grazing), places of family heritage, and as places of family recreation and quiet enjoyment.

Adjacent landholders to the Project have expressed concern regarding the impact of dust and other windblown particulate contaminants, increased vehicular traffic and associated impacts on access to key markets areas for cattle (e.g. Rockhampton).

Local land owners are familiar with the impacts and benefits associated with mining as an industry, and with current operations at Goonyella Riverside and Broadmeadow Mines near the Project site. Air quality, noise and dust conditions from these existing operations form part of the baseline, as considered in relevant sections of the EIS. BMA's existing strategies with respect to avoiding impacts on nearby properties are summarised in Table 4.4.

**Table 4-4 Existing policies and commitments**

Local/State Policy Initiatives	BMA Strategies	Project EIS Strategies
<ul style="list-style-type: none"> <li>• EP Act</li> </ul>	<ul style="list-style-type: none"> <li>• Multi-site dust monitoring program</li> <li>• Overarching stakeholder and community engagement mechanisms</li> </ul>	<ul style="list-style-type: none"> <li>• Stakeholder and Community Engagement Plan</li> <li>• Air Quality Management Plan</li> <li>• Noise Management Plan</li> <li>• Environment Management Plan</li> <li>• Road Use Management Plan</li> <li>• Traffic Management Plan</li> </ul>

The social impacts evaluated as of above a medium likelihood and significant consequence in the context of BMA’s existing commitments include potential for increased traffic, noise or dust, to affect amenity, as discussed in Sections 14 (Traffic), 11 (Air Quality) and 13 (Noise) of the EIS.

Mitigation strategies for social impacts include:

- Regular communication with adjacent land owners regarding construction plans, potential impacts, the effectiveness of mitigation strategies and resolution of any complaints; and
- Project-specific road use and traffic management strategies to effectively manage potential disruptions.

The desired social outcome is no worsening of existing environmental conditions, this includes the current level of traffic safety, and community and stakeholder satisfaction with the information provided by BMA with respect to potential impacts of the Project, such as aspects of individual land use and amenity, mitigation strategies (e.g. traffic or dust management), and resolution of any complaints.

This outcome will require regular, ongoing engagement between BMA and adjacent land owners.

**4.3.3 Regional settlement**

Grazing and the cultivation of good quality agricultural land occurs in a number of areas in and around Moranbah and Isaac LGA, including on privately-owned properties north of the study area. Direct impacts are expected on only two properties (owned by one landholder), and this is not seen as significant in terms of changes to regional settlement patterns.

Local and regional roads in the study area, including Peak Downs Highway, Suttor Development Road, Moranbah Access Road and Goonyella Road, are already heavily trafficked and in poor condition in places. Potential for an increase in traffic and any associated safety issues is discussed in Section N of the EIS.

Alternative transport options include travel by air via Moranbah Airport, which has recently been upgraded by BMA to support capacity for an increased commuter workforce.

Table 4.5 outlines existing policy and commitments by Queensland Government and BMA in relation to local and regional settlement conditions.

**Table 4-5 Existing policies and commitments**

Local/State Policy Initiatives	BMA Strategies	Project EIS Strategies
<ul style="list-style-type: none"> <li>• Royalties for Regions to support infrastructure and economic growth of regions.</li> <li>• Regional and Resource Town Action Plan for short-term initiatives</li> </ul>	<ul style="list-style-type: none"> <li>• Moranbah Airport</li> </ul>	<ul style="list-style-type: none"> <li>• Road Use and Traffic Management Plan</li> <li>• Environmental Management Plan</li> <li>• Project-specific road use and traffic management strategies to effectively manage potential disruptions</li> </ul>

There is a medium likelihood of short-term, changes to existing road and air traffic conditions, including:

- potential increase to air transport demand at Moranbah Airport, in the context of its upgraded capacity;
- demand and supply issues for airport facilities at workers’ origins, where QantasLink, Virgin and other suppliers will plan services in accordance; and

- potential impacts to road conditions and/ or residents' access and safe use of the Goonyella Access Road and Peak Downs Highway.

It is anticipated that BMA communication and engagement activities with local residents, road users and commercial engagement with airport facility staff and service providers, will provide all stakeholders with substantial capacity to effectively adapt and cope with temporary changes.

Mitigation strategies for social impacts include:

- consultation and commercial negotiations with managers of air services in advance of construction commencing to ensure capacity is adequate with no negative impacts on the travelling public; and
- regular communication with local residents and possible users of road and air transport regarding Project timing, potential changes to current conditions, targeted mitigation strategies (e.g. road diversions, closures and traffic control), and resolution of any complaints.

Where impacts are effectively anticipated and managed through construction, the desired social outcomes will include:

- a well-informed local and regional community regarding changes to road use and demonstrable community adaptation to road use or traffic management alternatives employed as per BMA's Road Use Management Plan and Traffic Management Plan; and
- an airport service capacity that sustains the demand of the Project's commuting workforce during construction.

Progress toward and achievement of desired social outcomes will be monitored annually during construction and for the first two years of mine operations.

## 4.4 Social and Cultural Values

These are described in detail in the Cultural Heritage Chapter, as are potential impacts to native flora and fauna and on places of cultural heritage resulting from land erosion and subsidence. BMA and representatives of the Barada Barna and Wiri Core traditional owner groups are in regular discussion regarding the use and values of land in the Moranbah region.

Opportunities for Indigenous engagement and employment are discussed in Section 16 (Cultural Heritage) of the Red Hill Mining Lease EIS and include:

- opportunity to increase Indigenous workforce capacity and BMA workforce diversity; and
- opportunity for Indigenous businesses in the region to benefit from supplying goods and services for the Project.

The social outcomes will include:

- increased employment uptake by Indigenous personnel (locally or regionally-based); and
- increased participation of Indigenous business in BLBP and supply opportunities

### 4.4.1 Local and regional values

The values, lifestyle and dynamics of Moranbah and Isaac region are centred on family, schools, community participation and sport. Connections between neighbours, workmates and family communities are strong, and the town has an active social life with frequent community events, and cultural and

sporting activities throughout the year. Moranbah holds its family-friendly nature as central to local character.

The local and regional community has experienced and interacted with mining activities for over forty years, and values the contributions made by the industry. However some community members are concerned by increased remote working options, and fear that local values will decline because workers are no longer invested in local communities, either socially or economically.

Consultation in 2012 identified a common local view that non-resident workers don't have the same respect for the town and its residents as locals, so acceptable standards of behaviour are not always met. Moranbah being a small and closely connected town, the presence of large numbers of strangers affects the perception of community safety.

This was expressed in a recent town meeting (May 2013), where locals expressed concerns about safety and police resources, in the wake of two violent incidents in town. In acknowledging their concerns, local police at the meeting noted that these incidents were not part of a trend and that Moranbah's safety compared favourably to other areas. The fact remains though that some people (particularly women and children) feel less safe when there are large numbers of men in town who aren't part of the community, and it is therefore particularly important that standards of behaviour and respect for local values are an integral part of workforce management. As a result of the community meeting, a committee is being formed to support community safety, which is positive evidence of the towns' resilience and ability to work together. BMA will take an ongoing interest in initiatives proposed by the community through this and other forums, including the Moranbah BMA Community Network.

Housing affordability is another key local value. As discussed in Section 4.9, the proposed up to 100% remote workforce is unlikely to affect housing affordability, given the commitment to accommodate all non-local workers in accommodation villages. Housing rental costs are currently at more affordable levels as discussed in Section 4.9.

As evidenced in consultation meetings, Isaac Regional Council and local residents support further coal mine development. Council and some residents see residential workforces as preferable, given they will increase the population size, potentially attract more housing, education and services, increase the number of people who can participate in community life, and contribute more to the local economy. Conversely, stakeholders are aware of the need to draw on other regions for labour, and to ensure housing demands are mitigated. In June 2013, Council welcomed the Project as an opportunity for increased business for mining service industries, but expressed the desire for increased local employment opportunities from the Project.

With respect to regional values, the key potential impact is the increase in employment options for people in the Mackay, Isaac and Whitsunday regions, along with opportunities for workers in other Queensland regions. There is also likely to be an increase in demand for mining industry products and services in the local and regional areas, which would be a welcome uplift for the local economy.

Table 4.6 outlines existing policy and commitments by Queensland Government and BMA in relation to current local and regional values. Existing strategies and commitments to support community values are outlined below.



**Table 4-6 Existing policies and commitments**

Local/State Policy Initiatives	BMA Strategies	Project EIS Strategies
<ul style="list-style-type: none"> <li>• RART Action Plan</li> <li>• Royalties for Regions</li> <li>• Queensland Police Services consideration of the need for increased resources and/or flexible delivery models to address population fluctuations and increased non-resident worker numbers</li> </ul>	<ul style="list-style-type: none"> <li>• Workforce Code of Conduct</li> <li>• BMA Community Development Strategy</li> <li>• Regular engagement with IRC</li> <li>• Moranbah-BMA Community Network consultation</li> <li>• Local Buying Program</li> </ul>	<ul style="list-style-type: none"> <li>• Accommodation Village provision for non-local workers</li> <li>• Worker transport provision and discouragement of private vehicle use</li> </ul>

In this context, the following impacts and opportunities have been identified as significant:

- potential for increased number (up to 2,000 at peak) and percentage of non-resident workers compared to residents to impact community perceptions of community safety and belonging;
- potential for anti-social behaviour from Project workers (addressed in Community Health and Safety section);
- cumulative issues (such as non-resident workers from multiple projects inundating events or public places) that need to be addressed through communication between industry participants; and
- opportunity to support community participation for young people (e.g. targeted initiatives in recreation, values/behaviour modelling and training opportunities).

Mitigation strategies for social impacts include:

- BMA's Workforce Code of Conduct and local values induction materials, to manage workforce behaviour and encourage respect and integration with existing community values;
- the Red Hill Accommodation Village Management Plan, which will outline objectives and practices to ensure a safe and attractive environment for workers, along with support for positive interactions between the workforce and community members (e.g. sporting and volunteering activities);
- engagement with QPS to monitor any changes to community safety issues and statistics;
- ongoing support for school programs which encourage young people's resilience, positive role modelling and community safety initiatives;
- the Stakeholder and Community Engagement Plan including complaints management, monitoring and reporting; and
- discussion with other industry representatives to encourage consistent high standards of behaviour for all projects' workforces.

The desired outcome of mitigation strategies for local community values is to align with existing strategies including:

- the integration of local values in workforce culture, behaviour and practice;
- well-informed stakeholders regarding the range of BMA strategies in place to address their concerns; and
- stakeholders do not attribute a decline in existing regional community values, such as character, amenity, safety, or social capital to the GRM incremental expansion and the RHM expansion option.



## 4.5 Demographic Characteristics

### 4.5.1 Population size and growth

In 2011, Moranbah's resident population was 8,990 with a non-resident population (NRP) of approximately 4,585 people, contributing to an overall full time equivalent (FTE) population of 13,575.

According to OESR's Series A population projections, the non-resident population of the Isaac Region LGA is likely to remain relatively stable at around 17,200 between June 2012 and 2013, including 4,585 people (or 26.7% of Isaac's NRP) in the Moranbah area. Under Series A, Isaac's non-resident workforce is expected to decline to 14,920 by 2019. Under Series B, there would be approximately 15,460 non-resident workers by 2019. As an average, this assessment has assumed a non-resident population in the Isaac region of 15,300 in 2020, around the time construction could commence, of which around 4,085 (26%) may be in the Moranbah area.

With an estimated average of 1,000 construction workers over a two year construction period for the GRM incremental expansion and the RHM expansion option, the workforce is assumed to represent an increase of around 20% in the non-resident workforce in the Moranbah region. Assuming a resident population of 12,000 people in Moranbah by 2020, this would represent an approximate increase of 6.25% in the FTE population over the two year period.

Moranbah's resident population is projected to approach 14,000 people in 2026. If non-resident worker numbers otherwise remain steady at 4,085 workers, the operational workforce of 1,500 is expected to represent an increase of approximately 36% in the non-resident workforce in the Moranbah area, and 8% of the FTE population.

These forecasts represent the highest possible impact scenario, i.e. an average of 1,000 construction workers over two years, and an operational workforce of 1,500 people. There is a range of other scenarios, such as a change in other non-resident workforce numbers, different rates of population growth, and staging (with lower workforce numbers). As such these modelling results should be considered indicative, and should be revisited (with the OESR and Isaac Council) prior to construction commencing, so that appropriate Local and State responses can be planned if required.

The key issue with respect to population impacts is the need for industry stakeholders to work with Local and State Government representatives in forecasting potential population changes so that government services can be planned commensurate with growth and industry stakeholders can adopt consistent standards for behavioural management and interactions between workers and the local community.

Table 4.7 outlines existing policy and commitments by Queensland Government and BMA to respond to and manage population growth in the region.

**Table 4-7 Existing policies and commitments**

Local/State Policy Initiatives	BMA Strategies	Project EIS Strategies
<ul style="list-style-type: none"> <li>• Regional and Resource Town Action Plan</li> <li>• Royalties for Regions</li> </ul>	<ul style="list-style-type: none"> <li>• Workforce Diversity strategies</li> <li>• Accommodation Village</li> <li>• Community Development Strategy</li> </ul>	<ul style="list-style-type: none"> <li>• Not required</li> </ul>

It is intended the Red Hill Mine Accommodation Village largely 'absorb' most workforce demands on recreation, health and support services, and this is addressed in Section 4.8.

Social impacts as a result of the potential contribution to FTE population increases include:

- increased gender disparity (addressed in Section 4.5.2);
- Increased potential for anti-social behaviour to affect community values and lifestyle (addressed in Section 4.4);
- increase in perceived risk to personal and community safety (addressed in Section 4.6); and
- increased demand and stress on social infrastructure such as hospital services and emergency services (addressed in Section 4.8).

Significant opportunity exists for increased employment of women at the GRM incremental expansion and the RHM expansion option, including supervisors and managers through BMA's employment diversity strategies.

There are also likely to be links between industry priorities (for safe, liveable local communities), the Regional and Resource Town Action Plan, and Royalties for Regions initiatives in the Isaac LGA, and opportunities for industry to support Moranbah's economic growth and infrastructure needs may be addressed through partnership between BMA, other industry partners and the Isaac Regional Council. This is discussed in Section 4.2. The desired outcomes of an effectively managed and mitigated FTE population increase include:

- The Red Hill Mine Accommodation Village largely absorbing any impacts from the increase in FTE population, including adequate facilities and services to mitigate local and essential service demand; and
- Adverse social impacts are mitigated through targeted measures that address key aspects such as community cohesion and essential service demand, in co-operation with local and regional agencies.

#### **4.5.2 Gender diversity**

Moranbah's 2011 resident population was 45.51% female and 55.49% male. With the GRM incremental expansion and the RHM expansion option contributing a small increase in FTE population during both construction and operations, it will also contribute to increased gender disparity in the Moranbah area.

Approximately 90% of the construction workforce is likely to be male, which would see an increase in the total male population of around 1,800 at peak construction. However the majority of workforce activity will be on the work site or in the accommodation camp, and assuming behavioural issues are well managed (see Section 4.6), impacts on social values are not expected.

The proposed remote workforce recruitment allows for a larger and more diverse applicant pool which creates an opportunity for significant diversity outcomes for the operational workforce. Prior to commencement of construction, BMA will establish targets for female and Indigenous workforce participation. BMA would also commit to undertaking training and recruitment strategies to significantly increase the number of workers who are new entrants to coal mining.

As a permanent workforce they are likely to have more interactions with the town over time, and may increase women's feeling of being a minority, demographically and culturally.

BMA's strategies for enhancing gender diversity and managing workforce behaviour are presented in Table 4.8.

**Table 4-8 Existing policies and commitments**

Local/State Policy Initiatives	BMA Strategies	Project EIS Strategies
<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>	<ul style="list-style-type: none"> <li>• BMA Diversity Strategy</li> <li>• Workforce Code of Conduct</li> <li>• Communication with Council, emergency services and other stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>• Red Hill Mine Accommodation Village</li> <li>• Accommodation Village Management Plan</li> </ul>

It is expected that any impacts and risks of increased gender diversity can be managed through BMA's existing standards for operations, with addition of support for community initiatives (through the Community Development Strategy) which deliver safe and active community participation programs for women.

Where diversity, participation and support strategies are effectively implemented, the social outcomes will include:

- effects of increased male FTE population substantially absorbed by the Red Hill Mine Accommodation Village; and
- increased percentage of female employees in operations.

### 4.5.3 Vulnerable groups

The demographic and social characteristics of Moranbah and Isaac LGA indicate that likely vulnerable population groups in the area include Indigenous people, women and children. The GRM incremental expansion and the RHM expansion option create an opportunity to increase workforce diversity and female participation rates as discussed in Section 4.5.

The community identifies the effect of large, predominantly male workforces on children and young people with respect to role modelling (e.g. poor behaviour in public) and concerns about women's safety due to larger numbers of unknown men around the community. These issues are addressed in Section 4.6.4, including a recommendation for the GRM incremental expansion and RHM underground expansion option to target good behaviour in workforce induction materials, strongly enforce the code of conduct, and enforce the withdrawal of accommodation rights to any non-local worker reliably reported to have affected perceptions of public safety.

In the context of the strategies and commitments outlined the desired social outcomes for vulnerable groups include:

- increased numbers of female and Indigenous employees;
- increased diversity of participation programs and increase female participation; and
- well-informed stakeholders regarding BMA programs for children and young people in Moranbah.

## 4.6 Community health and safety

### 4.6.1 Community health and wellbeing

Community health and wellbeing concerns raised during consultation in 2012 focused on the increase of non-resident workers adversely affecting local service demand, decline in support for volunteer services, and demand on local GPs and the hospital displacing local residents' needs. Volunteering rates in Moranbah have been in consistent decline over the past ten years, seeing the closure of services in

Moranbah such as Lifeline and Salvation Army. It appears unlikely that the GRM incremental expansion and RHM underground expansion option will accelerate this decline. The decline in availability of GPs has substantially been addressed (see Section 4.8.2), and other impacts on health services are addressed in Section 4.8.

Existing operations at Goonyella Riverside and Broadmeadow Mines near the Project site make some contributions to baseline conditions for air quality and dust. The potential for the GRM incremental expansion and RHM underground expansion option to adversely affect air quality and the health of residents within the affected area is addressed in Chapter 11 of the EIS.

In terms of other health and wellbeing indicators, Moranbah and Isaac LGA indicate sustained economic activity, employment, income and skills development opportunities resulting from the mining industry. The GRM incremental expansion and the RHM expansion option will contribute to sustaining and the continued enhancement of these indicators at a regional and state level, however the effects may not be measurable due to the diffuse nature of the effect and the interplay of other factors in the region.

The Project will also contribute to sustaining and enhancing opportunities for mining-related service industries and businesses in Moranbah (discussed further in Section 4.7) and therefore potentially to local and regional economic and social well being. Existing commitments which protect or enable better community health are described in Table 4.9.

**Table 4-9 Existing policies and commitments**

Local/State Initiatives	BMA Strategies	Project EIS Strategies
<ul style="list-style-type: none"> <li>Contribution to improved health services in Dysart (reducing impacts on Moranbah services)</li> </ul>	<ul style="list-style-type: none"> <li>Workforce Code of Conduct</li> <li>engagement with Isaac Regional Council;</li> <li>Moranbah-BMA Community Network</li> <li>BMA Diversity Strategy</li> <li>Indigenous Relations Plan</li> <li>BMA Local Buying Program BMA</li> <li>Community Development Strategy</li> </ul>	<ul style="list-style-type: none"> <li>Air Quality Management Plan</li> <li>Red Hill Mine Accommodation Village</li> </ul>

The social impacts evaluated as of or above a medium likelihood and significant consequence in the context of BMA's existing commitments include:

- enhanced health and wellbeing opportunities (economic activity, employment and income) experienced at regional and state level; and
- potential impacts to other health and wellbeing factors (community connectedness, access to services, and perceptions of personal and community safety) as addressed in relevant sections of this SIA.

Mitigation and enhancement strategies addressing community health and wellbeing include:

- project-specific air quality management plans, in addition to overarching strategies to monitor and mitigate impacts to air quality;
- equal employment and procurement opportunities at local, regional and state level;
- targeted programs for positive behaviour and community development; and
- regular engagement with IRC and Moranbah BCN to monitor and address changes to community health and wellbeing indicators.

The desired social outcome if impacts to, or opportunities to enhance community health and wellbeing are realised and appropriately addressed include:

- local land owners and community are well informed of potential impacts to air quality and implementation of mitigation strategies by the relevant stakeholders can be demonstrated;
- community and stakeholder satisfaction with BMA's level of information provision, engagement and targeted initiatives in addressing aspects of community health and wellbeing, as gauged through a six-monthly monitoring program with the Moranbah BCN;
- baseline rates of economic activity, income and employment are sustained or enhanced; and
- opportunities for skills development and lifelong learning among vulnerable groups (Indigenous, women and young people) are increased.

#### 4.6.2 Advantage and disadvantage

The SEIFA Index of Relative Socio-economic Advantage and Disadvantage (2011) indicates higher than average levels of socio-economic advantage (in the 8th decile) in Moranbah. However, the Index of Education and Occupation in Moranbah was substantially lower (in the 4th decile) indicating lower overall educational attainment, post-school qualification levels, female labour force participation and occupational diversity.

The non-resident population of Moranbah is not counted as part of the SEIFA indices, however the demographic factors which would influence SEIFA at the local level are unlikely to change.

Proposed employment may increase income levels, however this is only one factor in the index, and as workers are likely to be drawn from various centres in Queensland, measurable effects on advantage are not likely.

The expected social outcome is the retention of mining as a key local and regional socio-economic strength, contributing to socio-economic advantage. It may also offer an increase in employment opportunities for women in the region, but is otherwise not expected to change the Index of Education and Occupation index rating.

#### 4.6.3 Cost of living

In 2010, the cost of living in Moranbah was 13.9% above Brisbane. Average individual and household incomes in Moranbah were more double than the Queensland average in 2011 (see Section 3.4.2) which offsets costs for those on higher incomes.

Housing prices in Moranbah have decreased since 2010, however food, energy and transport costs have increased across Queensland (further information available in Chapter 19, Economic Impact Assessment). Regional towns often experience higher costs than coastal centres due to transport costs, lack of competition and, in mining towns, capacity within the community to pay higher prices. Moranbah is likely to continue to have a higher cost of living than Brisbane based on these factors. In recognition of higher costs of living, BMA subsidises housing for its workforce, so that housing costs are reduced to approximately \$70/week.

The GRM incremental expansion and RHM underground expansion option are not expected to increase the cost of living in Moranbah. The expected social outcome will be no attribution to an increased cost of living in Moranbah.

#### 4.6.4 Community safety

Stakeholder consultation in 2012 revealed concerns that the increasing number of non-resident workers in Moranbah negatively impacts the ‘family feel’ of the township, including community perceptions of safety and security. Others felt remote workforces were, or were perceived to be, contributing to an increase in alcohol and drug incidents in the community. Data modelled on 2006 census results for 2010 in Belyando Shire indicated lower perceptions of personal safety on local streets after dark, compared to the other former shires of Isaac region.

Five year trend data indicates Moranbah’s rate of offences against people and other offences peaked in 2007/08, while offences against property peaked in 2010/11. Offence rates in Moranbah were generally trending down in 2011/12 to rates lower than in 2007/08. This has been during a period which saw non-resident workforce numbers in Isaac LGA increase from approximately 9,380 in 2008 to approximately 17,125 in 2012. As such there does not appear to be clear evidence that the increase in non-resident workers has negatively affected the rate of offending in the Moranbah/Isaac area.

Other community safety concerns raised in consultation related to road safety, in town and on local connector roads. Existing constraints on police resourcing and emergency service capacity also have a strong influence on local community safety, and are addressed as part of the assessment of police, emergency and justice services in Section 4.8.3.

Table 4.10 outlines BMA’s existing policy and commitments to community safety. In this context, the following impacts have been identified:

- the number of people in an area may increase the likelihood of offences or anti-social behaviour occurring, particularly if positive behaviour and respect for local values are not strictly enforced;
- the risk that the cumulative impacts of non-resident workers from a variety of projects and operations will decrease levels of safety in Moranbah, dependent on consistent standards of workforce management, and sufficiency of police resources; and
- An increase in the number of buses and trucks in the area, or an increase in the risk of accident, in the context of emergency services’ current strained capacity, may require a corollary increase in the capacity of emergency services. The risk of decreased traffic safety in the Moranbah area has been assessed in EIS Chapter 14, Transport.

**Table 4-10 Existing policies and commitments**

Local/State Government Initiatives	BMA Strategies	Project EIS Strategies
<ul style="list-style-type: none"> <li>• Monitoring of need for increased or more flexible resources to assist emergency services and police to respond to large numbers of non-resident workers</li> </ul>	<ul style="list-style-type: none"> <li>• Emergency Management Protocols</li> <li>• Fatigue Management Plans</li> <li>• Workforce Code of Conduct</li> <li>• Alcohol and drug policies</li> <li>• stakeholder and community engagement, including:                             <ul style="list-style-type: none"> <li>• regular engagement with Isaac Regional Council; and</li> <li>• Moranbah-BMA Community Network consultation</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Stakeholder and Community Engagement Plan</li> <li>• Provision of bus transport between the airport, job site and accommodation village to decrease congestion and the potential for small vehicle accidents.</li> </ul>



Mitigation strategies to address community safety issues include:

- workforce behaviour management through plans as listed in Table 4.11;
- inclusion of local values in workforce induction material, and ongoing enforcement of expected standards of behaviour;
- ongoing working relationship with Queensland Police and other emergency services to implement the co-developed Emergency Response and Management Protocol;
- explore co-training and engagement opportunities which strengthen local emergency response capacity; and
- develop targeted strategies as required for training, positive behaviour-modelling and road safety needs.

The desired social outcome will be achieved where BMA protocols are effectively enforced and targeted mitigation strategies developed in consultation with QPS, IRC and emergency services. The improved social outcomes will manifest as negligible safety incidents or community safety complaints attributed to the GRM incremental expansion and the RHM underground expansion option.

## 4.7 Employment and economic development

### 4.7.1.1 Indigenous engagement

Strategies for Indigenous business participation currently being implemented or in planning include:

- working with Indigenous people in the region to identify their needs and aspirations in relation to employment;
- setting a 5% target for Indigenous employment in operations for the GRM incremental expansion and the RHM expansion option;
- identifying appropriate training programs in consultation with Indigenous people;
- rolling out the Indigenous pre-employment training and trainee employment initiative across the business;
- As part of its Indigenous Relations Plan, BMA will also develop initiatives aimed at increasing Indigenous businesses' participation in BMA's operations. These include:
  - developing an awareness program with Indigenous stakeholders to outline the process for tender based contracts;
  - working with Indigenous people of Central Queensland, and elsewhere, to identify opportunities to supply BMA operations directly, or in collaboration with other business and industry; and
  - supporting a three year Indigenous community development program with Central Highlands Regional Council, which is intended to enhance capacity, community strengths and positive relationships within the Indigenous and wider communities.

The positive impacts will include:

- increased opportunities for Indigenous employment in underground mining;
- increased Indigenous workforce skills levels; and
- opportunities for Indigenous businesses to supply the construction and operations of the GRM incremental expansion and the RHM expansion option.



## 4.7.2 Opportunities for local business

Community concerns exist regarding the need for population growth to support business growth and diversification. These concerns were reinforced in recent media releases by Isaac Regional Council regarding the Project and the opportunity it represents for local employment and for transport, goods and service industries.

BMA's Local Buying Program (BLBP) provides opportunities for small businesses to competitively supply goods and services to BMA as described in Section 4.2.2.4.

Table 4.11 outlines the existing policies and commitments by state government and BMA to local content. BLBP supports the Queensland Resources and Energy Sector Code of Practice for Local Content (2013) which offers guidance for further refinements and access to details of key supplier and buyer government programs.

In combination, BLBP and the general trade of non-resident workers (e.g. accessing local shops or the hotel) are likely to provide a small stimulus to the local, economy, which may result in increased local business trade, and potentially increased employment.

**Table 4-11 Existing policies and commitments**

Local/State Policy Initiatives	BMA Strategies	Project EIS Strategies
<ul style="list-style-type: none"> <li>Endorsement of Queensland Resources and Energy Sector Code of Practice for Local Content 2013</li> </ul>	<ul style="list-style-type: none"> <li>BMA Local Buying Program</li> <li>Indigenous Relations Plan</li> </ul>	<ul style="list-style-type: none"> <li>Support for Queensland Resources and Energy Sector Code of Practice for Local Content 2013 through BLBP</li> </ul>

The desired social outcome of BMA's well-established and successful Local Buying Program will involve:

- locally-awarded contracts, demonstrated through existing BMA public reporting of quarterly local buying activities for its northern Bowen Basin projects; and
- decreased feedback received regarding adverse impacts to local or regional business operations as a result of remote workforce effects.

Given timing for the delivery of the GRM incremental expansion and the RHM expansion option is uncertain, it is recommended that 12 months prior to construction, BMA engage with the QRC regarding the BLBP to ensure these established mechanisms remain aligned with Code of Practice for Local Content.

## 4.7.3 Skill shortages

Findings from the social baseline confirm workforce participation rates in Moranbah are high. At last report in 2012 (DEEWR), national occupation shortages were also at their lowest since 2007. Major shortages continue to include technicians and trades workers and machinery operators and drivers. These are prevalent occupations in Moranbah and Isaac LGA due to the concentration of mining industry activity. Moranbah businesses have expressed some difficulty attracting and retaining workers in all occupational areas due to the higher salaries available in the mines. The labour pool for local businesses is therefore also heavily reliant on secondary students.

Table 4.12 outlines the strategies employed by BMA in response to national skill shortages in technical areas of high need for its current operations and projects in the northern Bowen Basin. In this context, the proposal to draw up to 100% of the labour from other centres will have the following benefits:

- lower rates of labour draw locally, presenting opportunities for local business and service industries to attract and retain local employees; and
- equal opportunity for the employment of skilled labour from local or regional settings.

**Table 4-12 Existing policies and commitments**

Local/State Policy Initiatives	BMA Strategies	Project EIS Strategies
<ul style="list-style-type: none"> <li>• Great skills. Real opportunities.</li> <li>• Solid partners Solid futures</li> <li>• Women in Resources Strategy</li> </ul>	<ul style="list-style-type: none"> <li>• Support for Coalfields Training Excellence Centre</li> <li>• Recruitment across Queensland</li> <li>• Ongoing support for local businesses through BLBP</li> </ul>	<ul style="list-style-type: none"> <li>• Recruitment of up to 100% remote workforce</li> </ul>

Given there are relatively few underground mines compared to open cut mines, the future Red Hill Mine represents an opportunity to increase workforce participation and skills in underground mining. Should skills and labour shortages persist to 2020, training for the GRM incremental expansion and the RHM expansion option workforce will need to focus on new entrants to mining, whereas the availability of labour could see re-training for underground mining as the opportunity. BMA's commitment to training in service skills and 'back to work' opportunities for injured workers or mothers also offers opportunities for increasing employment diversity in Moranbah.

The operation of the Project depends on the availability of adequately trained and experienced staff. BMA will assess skills availability for construction and operation 12 months prior to construction and two years prior to operations, to enable training and recruitment strategies to be established in time to resource the construction and operational activities.

A range of local and regional training organisations are available to support increased training and capacity development initiatives. Increased demand on public and private training providers is likely to be spread across Queensland regions. Many are private organisations and will appreciate extra supply opportunities. Strategies for increased training supply would need to focus on the capacities existing within the Isaac and MIW regions, if opportunities for local people to access training opportunities are to be increased. It is recommended that, 12 months prior to construction, the owners develop a training supply strategy with a focus on:

- capacity development of training organisations that support that mining and related service industries;
- increased training opportunities for young people, women and Indigenous people;
- co-operation with DETE training initiatives which address shortages in the mining and mining services industry; and
- lifelong learning and skill development programs that support workforce and employment diversity, including 'back-to-work' training support.

Given timing for the delivery of the GRM incremental expansion and the RHM expansion option is uncertain, it is recommended that 12 months prior to construction, BMA engage with the Department of Education, Training and Employment and registered training organisations to align BMA's training supply strategies with current policy objectives and initiatives.

The success of the training supply strategy will be realised through sustained or enhanced capacity of industry-related training organisations during construction and the first two years of operations. The desired social outcomes of these strategies are:

- no exacerbation of current skills shortages at local and regional level; and
- negligible draw on local businesses staff who may be attracted to mine work.

## 4.8 Social Infrastructure

This section examines potential impacts on social infrastructure, including facilities, services and networks. Impacts in this section are assessed in the context of an up to 100% remote workforce, and provision of adequate social, health and recreational infrastructure within the Accommodation Village. Existing high-level policies and commitments are summarised in Table 4-13. Additional notes on the adequacy of services and strategies which may be required are identified in the relevant sections below

**Table 4-13 Existing policies and commitments**

Local/State Government Initiatives	BMA Strategies	Project EIS Strategies
<ul style="list-style-type: none"> <li>• RART and Royalties for Regions focus on improved social and health infrastructure in the Bowen Basin (e.g. funding or Dysart Medical centre)</li> </ul>	<ul style="list-style-type: none"> <li>• Community Development Strategy, including investment in community facilities</li> <li>• Community development projects and partnerships as identified through regular stakeholder engagement</li> </ul>	<ul style="list-style-type: none"> <li>• Up to 100% remote workforce</li> <li>• Provision of a range of recreational, health and support services within the Accommodation Village</li> </ul>

### 4.8.1 Education and training

Moranbah has three primary schools and one high school which is adequate for the population size, but continues to have unmet demand for childcare services. Demand for childcare and school services is unlikely to increase in the Moranbah given the proposed up to 100% remote workforce.

Increased demand on public and private training providers is likely to be spread across Queensland regions. Many are private organisations and will appreciate the opportunity for extra supply. Strategies for increased training supply would need to focus on the capacities existing within the Isaac and MIW regions, if their turnover and opportunities for local people to access training opportunities are to be increased. It is recommended that BMA assess the capacity of local and regional training providers 12 months prior to construction to inform training supply.

### 4.8.2 Health Services and Facilities

Moranbah Hospital and GP services in the Isaac region have limited capacity to service the demands of Moranbah's population, including non-resident workers' demands on services. This has recently been addressed through a partnership between BMA, Moranbah medical centres, other industry proponents and Medicare Local. The number of GPs in Moranbah increased from four to seven during 2012-2013. local doctors report there is currently adequate local capacity, and they plan to recruit additional staff to respond to growth. Other positive developments as a result of the health services partnership are planned, including a medical centre at Dysart being supported by Queensland Government funding.

Given a peak of 2,000 construction workers and 1,500 operational workers, increased demands on local health facilities (ambulance, GPs, Hospital and allied health) are expected.

The DoHA considers the ratio of 0.71:1000 as the standard doctor-to-patient ratio, which, compared to BMA's estimated construction workforce of up to 2,000 is expected to require the equivalent of access to at least one full time doctor, as well as to a range of allied health services. This demand may be

moderated given workers may see their own doctors when off-shift, however local experience indicates some demand associated with non-resident workers.

Increased demand can be reduced through provision of on-site medical staff, or through collaborative arrangements for local service provision commensurate with the size of the workforce, relative to benchmarks for GPs per population. BMA is currently working with local medical service provider ER24 to provide paramedic and medical care to its local mine operations.

Given timing for the delivery of the GRM incremental expansion and the RHM expansion option is uncertain, it is recommended that 12 months prior to construction, BMA engage with local medical providers, including Moranbah Hospital, local GPs and the Queensland Ambulance Service, to assess capacity for additional demand to be absorbed by local service provision arrangements. The capacity of health services capacity will also require monitoring by the Queensland Government as part of its assessment of cumulative impacts, and as part of planning for regional population growth.

The potential for increased demand on ambulance services is discussed in Section 4.8.3.

The desired social outcome for managing workforce demand on local health services is that non-resident workers' needs are addressed sufficiently to avoid any impact on residents' access to local medical and health services. This will include consultation with medical service providers to identify any gaps in local capacity, and development of strategies to reduce and manage workforce demand. The effectiveness of BMA's local service arrangements will be monitored during construction through feedback from Moranbah Hospital, Local GP and allied health providers and Queensland Ambulance Service.

### **4.8.3 Police, Emergency Services and Justice**

Moranbah and Isaac region's emergency services currently have limited capacity to service their geographic region and the FTE population, as staffing levels are generally calculated on the resident population, and non-resident workers may increase the population load by more than 50%. In consultation during 2012, regional police and ambulance officers noted constraints on resourcing in Moranbah, and the fact that permanent staff are not allocated or don't stay, leading to staff shortages. At June 2013, the Queensland Police Union was quoted saying that 11 officers were stationed in Moranbah while the bare minimum staffing requirement for a 24-hour station (indicated as required by the size of the FTE population) was 18 officers. Local emergency service capacity for responses to multi-vehicle accidents, bus accidents or air traffic accidents is also less than optimal.

Table 4-14 outlines the strategies employed by BMA to manage demand on local and regional emergency services. In this context, it is expected that the impacts are of medium likelihood and consequence will include:

- increased demand on Police, QAS and Rural Fire Brigade in response to accommodation village call outs, traffic incidents, and wide load supervision; and
- this is part of a cumulative demand on police and emergency services due to non-residents workforces for a number of operations, and requires a Government planning and resourcing response.

**Table 4-14 Existing policies and commitments**

Local/State Government Initiatives	BMA Strategies	Project EIS Strategies
<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>	<ul style="list-style-type: none"> <li>• Stakeholder engagement mechanisms including regular engagement with QPS</li> <li>• Existing cooperative engagement framework and emergency response protocols with QPS, QAS and RFB</li> <li>• Workforce Code of Conduct</li> <li>• Fatigue Management and co-developed Emergency Response Protocol</li> <li>• Stakeholder Engagement and Communications Plan</li> </ul>	<ul style="list-style-type: none"> <li>• Project Road Use and Traffic Management Plans</li> <li>• Accommodation Village Management Plan</li> </ul>

The mitigations strategies required in respect to demands on police and emergency services are:

- the Accommodation Village Management Plan which outlines behavioural standards, policies on alcohol and drug use in the village, and emergency response procedures;
- a commitment to engagement with local and regional police and emergency services, ahead of construction and operational commencement, to advise services of:
  - the anticipated workforce build up;
  - major activities which would place demand on local services (such as movement of large equipment by road);
  - behavioural standards; and
  - communication protocols;
- orientation to the Accommodation Village and its emergency response procedures prior to the Village's operation; and
- consultation on the Emergency Response Protocol, to ensure effective co-operation between Project staff and local services.

The key desired outcome is an adequate level of government funding for emergency services (fire and ambulance) and Police, commensurate with the size, location and of the FTE population resulting from cumulative impacts.

The desired social outcome is for appropriately managed demand on police and emergency services including demonstrably good working relationship between the workforce and Queensland Police, Ambulance and Fire and Resource Services in Moranbah, and minimisation of demands on services as a result of on-site behavioural and safety management procedures.

#### 4.8.4 Community and Civic Services

Moranbah's community and civic services such as counselling, financial counselling and referral to support services have limited capacity to an increased population, however support services report negligible demands from non-resident workers. BMA's existing Employee Assistance Program includes the provision of on-site counselling and employee wellbeing coordinators' services. These services are expected to reduce the impacts on civic and community services to negligible levels.

Community participation has been affected by mining shift rosters which limit the capacity of workers and sometimes their families to participate in community events or volunteerism. Consultation identified a concern that non-resident workers don't contribute anything to local community life to account for their drain on local resources.

An opportunity exists to increase workforce participation in community volunteering and support initiatives if structured opportunities for such contributions are provided. Existing strategies that provide structured opportunities for community participation are addressed within BMA's Community Development Strategy.

Where opportunities for increased community participation are realised and engaged by the owners, the social outcomes will be:

- no negative feedback regarding low community participation rates attributed to the GRM incremental expansion and RHM underground expansion option; and
- increased BMA reports of structured workforce / community participation events.

#### 4.8.5 Recreation and Cultural Facilities

Moranbah has a good level of recreational facilities, with numerous sporting fields, club houses, and a recently upgraded aquatic centre. The cumulative increase in non-local residents has resulted in some increases in demands for sporting fields and some concerns about behaviour at sporting events, given the number of families who attend (e.g. football fixtures and rodeos). Strategies in place to address these concerns include:

- Accommodation Village provision, including recreational facilities commensurate with the size of the Village;
- local values induction material;
- stakeholder and Community Engagement Plan including complaints management, monitoring and reporting; and
- regular engagement with Queensland Police Service and Isaac Regional Council regarding any impacts on facilities and services.

In this context, the impacts and opportunities of or above a medium likelihood and significant consequence are:

- potential impact on locals' enjoyment of sporting and recreational activities if workers do not behave appropriately; and
- potential increased pool of participants for local fixtures and competitions.

Strategies to address these impacts and opportunities include:

- workforce code of conduct;
- provision of recreational facilities within the accommodation village; and
- provision and management of opportunities for scheduled sporting activities between town residents and workers during operations, to increase the size and vitality of local sporting competitions.

Assuming provision of adequate recreational facilities within the Village, and opportunities for well managed workforce/community recreational activities are provided, the desired social outcome of no impact on locals' use and enjoyment of recreational facilities is likely to be met.



## 4.9 Housing

House prices (both rental and purchase) in Moranbah have generally been higher than comparators over the last ten years. At the time of assessment, Moranbah housing prices were above state and regional averages, but significantly more affordable than in the previous three years. Cost reductions attributable to BMA's rent control policy instituted in 2011, a decrease in speculative housing purchase for rental, development of the BMA Accommodation Villages and the 2012 downturn in the coal industry. Moranbah's housing market is likely to experience ongoing fluctuations along with changes in mining growth plans.

BMA owns a total of 1,493 houses in Moranbah, Blackwater, Dysart and Emerald. In July 2013, BMA completed the construction of the 400th new employee home built during 2011-2013, reflecting BMA's commitment to ensuring its host communities are attractive places for employees to live and work. BMA has also recently contributed to the delivery of 16 units of affordable housing in Dysart and Moranbah, through its \$5 million contribution (including \$3.5 million spent and \$1.5 million pending investment) to the Isaac Affordable Housing Trust.

Stakeholders' key concerns as expressed in consultation were that the cumulative impacts of demands on local housing stocks by mining projects leads to decreased affordability, and overcrowded, communal workers' homes, which impact neighbourhood amenity and community safety.

Given provision of accommodation for all non-local workers including contractors, the GRM incremental expansion and the RHM expansion option are unlikely to significantly exacerbate demand for short-term accommodation, or contribute to overcrowded, communal homes in the local neighbourhood.

Table 4-15 outlines the existing strategies of government and BMA to manage the availability and affordability of housing and rental accommodation.

**Table 4-15 Existing policies and commitments**

Local/State Policy Initiatives	BMA Strategies	Project EIS Strategies
<ul style="list-style-type: none"> <li>• IRC planning scheme in preparation to increase land availability</li> <li>• Regional and Resource Town Action Plan priorities - development of the Belyando Estate</li> </ul>	<ul style="list-style-type: none"> <li>• BMA Rent Control Policy</li> <li>• BMA provision of housing for all residential workers</li> </ul>	<ul style="list-style-type: none"> <li>• On-site Red Hill Mine Accommodation Village</li> </ul>

This assessment assumes that rental prices will increase along with increases in house values over time, if mining and other economic activity is maintained or improved beyond 2013 levels. However, it is considered unlikely that the combination of factors (extreme shortage of supply, intense speculation based on short term trends and quantum increases in demand due to new residential workforces) will occur in combination during the next five to ten years, and it currently appears unlikely that housing prices will reach the extremes of 2010-2012 during the 2020-22 period.

An evaluation of social impacts in this context finds:

- impacts on availability and affordability of housing supplies in Moranbah will be largely mitigated through accommodation provision for the workforce, including adequate accommodation village capacity and management planning; and



- increases in service staff (e.g. police) or business staff as a result of cumulative demands may require Council or Government consideration of housing development, dependent on the availability of housing stocks from 2020.

Given the expansion in BMA's housing stocks of 400 dwellings in the Bowen Basin during 2011-13, plans by Isaac Regional Council to increase residential land availability, and the UDA's development of affordable housing in Moranbah, it is more likely that housing stocks in 2020 could absorb and adapt to any additional demand on housing from locally resident workers compared to conditions which have existed in recent years.

The social impacts and opportunities evaluated as of or above medium likelihood or significant consequence include:

- increases in local service staff (e.g. police) or business staff may require Local or State Government consideration of cumulative housing demands, dependent on the availability of housing stocks from 2020.

Housing impacts and outcomes will be realised in a cumulative context rather than as a direct impact of the Project. As such, the desired social outcomes is for maintenance of at least current affordability levels (i.e. housing costs as a proportion of gross income) in Moranbah during the 2020-2022 period, which will require co-ordinated and co-operative responses from Local and State Governments with resource companies who make demands on local housing stock.

## 4.10 Cumulative impacts

The cumulative social impacts of mining activities on Moranbah and the Isaac region are mostly felt through an increased demand on physical and social infrastructure and services from an increased resident and non-resident population. There may also be increased demand for housing, goods and services and the MIW Region if workers in projects located within Isaac region (and the central Highlands region) relocate their families to the Mackay and Whitsunday regions.

The key determinant of cumulative social impacts in the Isaac regional context is the number and demographic characteristics of additional people, including non-resident workers, in the region as a result of major projects. This affects:

- population characteristics (e.g. number of non-resident workers in the region);
- the labour force (e.g. employment duration, skills availability and supply issues);
- social infrastructure (e.g. health, police and emergency services, and training supply issues);
- housing (e.g. demand associated with the projects); and
- impacts on community values or social indicators.
- The lead time between the Project's EIS and potential construction of the largest component from around 2020, and current volatility in mining growth projections, makes it difficult to accurately define the number or location of major projects whose construction and/or operation will coincide with that of the Project.

This assessment of the GRM incremental expansion and RHM underground expansion option therefore bases prediction and evaluation of contribution to cumulative social impacts on the likely contribution to the total non-resident workforces and FTE population forecast in the Isaac region, based on OESR's current projections of non-resident numbers to 2019 (the latest currently available estimate).

OESR projections estimate Isaac LGA's annual rate of growth at 3%<sup>9</sup>, from a population of 23,277 in 2011 to 31,418 in 2021. On this basis the resident population of Isaac LGA (based on 2008 ASGC) is likely to be approximately 31,000 in 2020.

OESR's projections of non-resident workers are largely based on companies' estimations of workforces over time. The number of non-resident workers on shift in the Isaac region was estimated (in early 2013) at 17,190 in 2013. This is currently expected to decrease to 14,920 in 2019, or to 15,460 under series B<sup>11</sup>. The projections included an assumption that the Project would commence construction in 2018 with a small number of workers.

Red Hill's construction workforce is assumed to build from a small workforce (a few hundred) in 2020 to a peak (potentially in 2021) of 2,000 workers. For the purpose of modelling cumulative impacts, an average of 1,000 construction workers has been assumed across the two year construction period. As such, the Project is assumed to represent some 6.5% of the projected number of non-resident workers in the Isaac region during 2020-2021<sup>12</sup>.

The Project's operation is assumed to commence in 2022. Based on the OESR's projection of an average increase in Isaac LGA's population between 2021 and 2026 of 570, the resident population in 2022 could be assumed at approximately 31,989 people. Adding the number of non-residents, this would see a total FTE population of 46,980 people, if the number of non-residents workers remains constant at around 15,000 (the average of Series A & B projections for 2019). The Project's operational workforce of 1,500 is therefore expected to represent approximately 10% of the Isaac region's non-resident population and approximately 3% of the FTE population.

The contribution of the GRM incremental expansion and RHM underground expansion option to cumulative impacts is expected to consist of:

- a long term increase in the FTE population of around 2% from around 2022, declining as a percentage of the population if the Moranbah region's population continues to grow;
- a small increase in the percentage of males in the FTE population (see Section 4.5);
- an incremental increase in demand for police and emergency services in the Isaac region;
- an increase in demand for health and medical services if these are not delivered through existing partnerships with local providers;
- negligible impact on cumulative impacts on housing access and affordability in Moranbah; and
- potential increased road traffic (primarily buses and trucks) on the Goonyella Access Road, Moranbah Access Road and Peak Downs Highway (discussed in EIS Chapter 14).

BMA is currently active in a number of collaborative efforts to address cumulative impacts, including: participation in the Moranbah Cumulative Impact Group, and establishing relationships and regular communication between construction and operations managers, and local QPS, QAS and QFRS teams.

<sup>9</sup> Latest OESR projections were calculated in 2011 - <http://www.oesr.qld.gov.au/subjects/demography/population-projections/publications/qld-govt-pop-proj-lga/index.php>

<sup>10</sup> Series A, based on the non-resident population on-shift in the area at June 2012. It includes non-resident workers associated with existing operations, as well as future projects that have reached final investment decision (FID) and commenced construction.

<sup>11</sup> Series B includes Series A, plus the projected non-resident population growth from projects that have an EIS approved but have yet to reach FID.

<sup>12</sup> Figures and timing are presented for modelling purposes and do not represent a commitment by BMA

Cumulative impacts need to be addressed through collaboration between Regional Councils, State government agencies, resource companies and communities. Mitigation and monitoring of cumulative impacts will therefore require the involvement and coordination of multiple stakeholders.

The owners' commitment to identifying and monitoring cumulative impacts includes:

- prior to construction and operation, evaluate potential contributions to cumulative impacts in the context of social conditions and the number of other relevant projects at the time;
- consult with the Isaac Regional Council and Queensland Government about their plans to accommodate increased growth in the Moranbah and Isaac Region, to identify any potential collaborations; and
- continuing participation in cumulative social impacts forums and industry initiatives.

#### **4.11 Impacts of Decommissioning**

The Project is likely to be in operation for a minimum of 25 years. Decommissioning activities will include the removal and recycling (where practicable) of above ground infrastructure, site rehabilitation and remediating the site to applicable regulations and standards in place at that time.

It is possible that decommissioning will cause some community discomfort regarding loss of benefits accruing from the mine to the local and regional area. Given BMA and other proposed growth plans in the Bowen Basin, the future Red Hill Mine is likely to be one of several projects operating in the area at the time of decommissioning, so it is also possible that its cessation will have little effect on local communities.

Local social conditions are likely to be substantially changed by the time decommissioning occurs, and it will be necessary to evaluate the potential impacts of decommissioning in the context of local and social conditions and Government and BMA policy at the time.

Prior to decommissioning, BMA will consult with local communities regarding potential impacts, and identify strategies which will reduce or avoid social impacts. A Management Plan will need to be developed three to five years prior to expected decommissioning, addressing collaboration with key stakeholders as part of closure planning.

## 5. Impact management and monitoring

This section outlines the Proponent's approach to management of social impacts and opportunities, including stakeholder engagement. It also draws together the findings of previous sections, and outlines BMA's monitoring approach for the GRM incremental expansion and RHM underground expansion option.

### 5.1 Approach

The Queensland Government's guidelines for Social Impact Assessment include a focus on adaptive management. This is a learning-based method of managing impacts, which for SIA should include:

- developing strategies based on existing detailed knowledge of social conditions;
- focussing on the achievement of positive social outcomes;
- acknowledging uncertainties, and monitoring the effectiveness of strategies in achieving the desired outcomes; and
- changing mitigation strategies if required to ensure the outcomes are achieved.

This approach relies on ensuring the assessment is based on accurate baseline data, and monitoring (through data collection and stakeholder engagement) to ensure mitigations are effective. The following sections outline stakeholder engagement and the monitoring process which will ensure an effective approach to adaptive management.

### 5.2 Stakeholder engagement

This assessment has identified a range of stakeholders at local, regional and state level who are involved in ensuring positive social outcomes as a result of mining and resource activity in the region. They include Isaac Regional Council, Queensland Government agencies in respect to regional planning, local infrastructure planning and Royalties for Regions, and businesses, community organisations and service providers at local and regional levels.

The assessment has also described BMA's existing community engagement strategies, which aim to ensure BMA is involved in community development and cumulative impact responses. A detailed stakeholder engagement strategy will be developed prior to the commencement of construction, with engagement mechanisms to include:

- consultation and communication with adjacent land holders to identify and mitigate concerns;
- regular briefing to Isaac Regional Council on the schedule, progress, potential impacts and mitigations for the Project, and identification of partnership opportunities to maximise social opportunities;
- consultation with the Moranbah BCN to evaluate current social conditions, and monitor potential impacts;
- engagement with Queensland Government agencies, including:
  - Queensland Police, Queensland ambulance, the Fire and Rescue Services, and Queensland Health, to identify any potential impacts on local services and how they should be mitigated; and

- Department of State Development and Infrastructure Planning, and the Department of Education Training and Employment, to identify synergies and potential partnerships which progress regional and state agendas for social and economic development; and
- Provision of a complaints and feedback mechanism which is promoted and accessible to all local stakeholders.

Stakeholders involved in planning, delivering or monitoring social impacts and opportunities are summarised below for each social factor. Specific activities will be undertaken as part of the stakeholder engagement strategy, and as part of reviewing social conditions potential impacts, and initiatives to maximise social outcomes, in the twelve months prior to construction.

**Table 5-1 Stakeholder engagement on mitigation and enhancement strategies**

Social factors	Key stakeholders
<b>Local and regional planning outcomes</b>	<ul style="list-style-type: none"> <li>▪ DSDIP</li> <li>▪ IRC</li> </ul>
<b>Settlement patterns</b>	<ul style="list-style-type: none"> <li>▪ Directly affected and adjacent landholders</li> <li>▪ Local community and road users</li> <li>▪ QPS and QAS</li> </ul>
<b>Social and cultural values</b>	<ul style="list-style-type: none"> <li>▪ Project workforce</li> <li>▪ Directly affected and adjacent landholders</li> <li>▪ BCN</li> <li>▪ IRC</li> <li>▪ QPS</li> <li>▪ Traditional owner and Indigenous stakeholders</li> </ul>
<b>Demographic characteristics</b>	<ul style="list-style-type: none"> <li>▪ DSDIP</li> <li>▪ OESR</li> <li>▪ IRC</li> </ul>
<b>Health and well being</b>	<ul style="list-style-type: none"> <li>▪ Project workforce</li> <li>▪ BCN</li> <li>▪ IRC</li> <li>▪ QPS, QAS and RFB</li> <li>▪ Qld Health – Moranbah Hospital</li> <li>▪ Community Support Services – MDSS</li> </ul>
<b>Employment and Economic Development</b>	<ul style="list-style-type: none"> <li>▪ EDQ</li> <li>▪ IRC</li> <li>▪ BCN</li> <li>▪ Local and regional training / capacity building organisations</li> <li>▪ Local businesses</li> </ul>
<b>Social infrastructure and services</b>	<ul style="list-style-type: none"> <li>▪ IRC</li> <li>▪ QPS, QAS and RFB</li> <li>▪ Qld Health – Moranbah Hospital</li> <li>▪ Community Support Services – MDSS</li> <li>▪ BCN</li> </ul>
<b>Housing</b>	<ul style="list-style-type: none"> <li>▪ EDQ</li> <li>▪ IRC</li> <li>▪ Industry stakeholders</li> </ul>

A number of the Project-specific mitigation strategies (see Tables 4.3-4.9) include consultation as a core component. Recognising the time lag between current conditions and those at the commencement of construction, and to achieve an adaptive management approach, the following additional engagement strategies will be employed.

**Table 5-2 Project Engagement Strategies**

Project Phase	Engagement Strategies
12 months prior to construction commencing	<ul style="list-style-type: none"> <li>▪ Liaison with the OESR and DSDIP to confirm population estimates and any social vulnerabilities (such as high youth unemployment) in the local and regional areas;</li> <li>▪ Update affected land holders so they are aware of timing, mitigation strategies and how to communicate with the owners;</li> <li>▪ Consult with Isaac Regional Council and the Moranbah-BMA Community Network (Moranbah BCN) to confirm the status of conditions such as housing access and service provision, and identify other issues which are directly relevant to the GRM incremental expansion and RHM underground expansion option;</li> <li>▪ Recalibration of the social baseline, to ensure mitigation strategies can be monitored against current conditions, and identify any further stakeholders to be involved;</li> <li>▪ Identify any new potential impacts and opportunities, and the relevant stakeholders with whom BMA will co-operate to address new impacts; and</li> <li>▪ Consult with Indigenous businesses in the MIW region about their capacity, supply opportunities and strategies to close the gap between business capacity and the need for supplies and services.</li> </ul>
6 months prior to construction	<ul style="list-style-type: none"> <li>▪ Consult with Isaac Regional Council and relevant state agencies to identify existing initiatives, local priorities and regional planning outcomes to be recognised in the execution of the Project;</li> <li>▪ Meet with Queensland Police, Ambulance, Fire and Rescue and Hospital representatives to advise of the workforce build up and accommodation village plans, and develop co-operative responses to traffic management; and</li> <li>▪ Provide information through the BLBP Community foundation and local and regional business networks, advising of contracting and supply opportunities.</li> </ul>
<i>1 month prior to construction</i>	<ul style="list-style-type: none"> <li>▪ <i>Provide an update to IRC, State agencies and the Moranbah BCN on the commencement of construction, traffic management and communication mechanisms.</i></li> </ul>
<i>During construction</i>	<ul style="list-style-type: none"> <li>▪ <i>Meet regularly (e.g. quarterly) with Isaac Regional Council and the Moranbah BCN to provide update and monitor mitigations;</i></li> <li>▪ <i>Provide regular updates to community members on the construction and environmental management strategies;</i></li> <li>▪ <i>Maintain a complaints and feedback mechanism commensurate with BMA practice;</i></li> <li>▪ <i>Communicate with the Queensland Police Service, to a schedule agreed with the Regional Superintendent, regarding traffic management, workforce numbers and emergency response procedures; and</i></li> <li>▪ <i>Provide information to local and regional businesses regarding the commencement of operations, and new supply and service opportunities arising.</i></li> </ul>
One month prior to completion of construction	<ul style="list-style-type: none"> <li>▪ Advise IRC, Moranbah BCN, DSDIP and Queensland Police Service of the upcoming commissioning;</li> <li>▪ Engage stakeholders in reviewing social conditions and the effectiveness of mitigation strategies; and</li> <li>▪ Identify new or amended mitigation strategies to manage the social impacts and opportunities of the operation.</li> </ul>

Project Phase	Engagement Strategies
During operation	<ul style="list-style-type: none"> <li>▪ Engagement by BMAs Community Liaison Officers, who support operational projects through a range of information, engagement and development strategies;</li> <li>▪ Communication with Council and the BCN to advise of any issues or strategies relevant to social conditions and community life during operations; and</li> <li>▪ Maintain complaints and feedback mechanisms throughout the life of Project activities.</li> </ul>

### 5.3 Summary of impacts and mitigations

Tables 5.3 – 5.9 summarise:

- the nature of significant social impacts and opportunities, and the phase in which they would occur;
- mitigation, management and enhancement strategies for each impact and opportunity, and the timing for each strategy; and
- the desired social outcomes and social indicators for each issue, as the basis of adaptive management and monitoring

The monitoring strategy for the Project's construction and operation is outlined in Section 5.4.



**Table 5-3 Settlement Patterns and Directly Affected Properties - Impacts, Opportunities and Mitigations**

Phase	Impacts and Opportunities	Social mitigation and enhancement strategies	Timing	Desired Social Outcomes	Indicators
Cons and Ops	Interruption of business and on-farm employment	Compliance with the Land Access Code and Land Act provisions, including ensuring land owners' needs and expectations are considered.	12 months prior to construction	A satisfactory agreement with land owners for land access or acquisition.	Compliance with agreements.
	Loss of social / family connectivity	Regular communication with affected land owner regarding construction plans and potential impacts, and resolution of any complaints.	During construction and first two years of ops		Landholder satisfaction with communication, and complaints rate.
Cons and Ops	Potential to contribute to declining amenity for land owners near the Project	Regular communication with adjacent land owners regarding construction plans, potential impacts, mitigation strategies and resolution of any complaints.		Community and stakeholder satisfaction with the information provided by BMA with respect to: <ul style="list-style-type: none"> <li>• upcoming construction plans;</li> <li>• potential impacts, - mitigation strategies; and</li> <li>• resolution of any complaints.</li> </ul>	Community satisfaction with BMA strategies, as measured through complaints rate.
		Project-specific road use and traffic management strategies to effectively manage potential disruptions.			
Cons and Ops	Potential impacts to road conditions on Goonyella Access Road and Peak Downs Highway	Regular communication with local residents and users of road and air transport regarding timing, potential changes to current conditions, mitigation strategies (e.g. traffic control), and resolution of any complaints.	12 months prior to construction	A well-informed local and regional community regarding changes to road use.	Complaints rate - project-related traffic issues.
				Demonstrable community adaptation to road use or traffic management alternatives.	

**Table 5-4 Social and Cultural Values - Impacts, Opportunities and Mitigations**

Phase	Impacts and Opportunities	Social mitigation and enhancement strategies	Timing	Desired Social Outcomes	Indicators
Cons	Potential for increased non-resident workers to impact community connections (knowing people in the community) and perceptions of safety	Workforce Code of Conduct and local values induction materials to manage workforce behaviour and encourage respect and integration with existing community values.	During construction	Integration of local values in workforce culture, behaviour and practice Management of workers' interactions with community at community events.	Complaints rate with respect to impacts to community lifestyle or values.
		Engagement with QPS to monitor any changes to community safety issues and statistics.			
Ops	Provision of support for community participation for young people	Community development programs which encourage positive interactions between workers and community members. Programs which strengthen young people's resilience e.g. leadership, mentoring and self-awareness).	During construction and first two years of ops	Young people are provided with opportunities to increase participation in training, employment and community life.	Young people's reported satisfaction with opportunities (as part of BMA's bi-annual community perceptions survey).
		Ongoing support for school programs which encourage young people's resilience and community safety initiatives.			
Cons	Cumulative issues (such as non-resident workers from multiple projects) that need to be addressed in concert with industry in the region.(see also Table 4.5)	Stakeholder and Community Engagement Plan including complaints management, monitoring and reporting.	During construction	Community satisfaction regarding the range of BMA and other industry strategies in place to address their concerns.	Community members report no increased negative cumulative impacts on community values.
		Discussion with other industry representatives to encourage consistent high standards of behaviour for all projects' workforces.			

**Table 5-5 Demographic Characteristics - Impacts, Opportunities and Mitigations**

Phase	Impacts and Opportunities	Social mitigation and enhancement strategies	Timing	Desired Social Outcomes	Indicators
Cons and Ops	Opportunity for industry stakeholders to work with Council and Government staff to forecast population changes so services can be planned commensurate with growth	Strategies to mitigate potential impacts on population size include: <ul style="list-style-type: none"> <li>workforce management strategies;</li> <li>accommodation village provision;</li> <li>enforcement of expected standards of behaviour; and</li> <li>monitoring of demands on local services.</li> </ul>	During construction and operations	Project mitigation strategies support local and regional planning priorities. Health service demand (is addressed by BMA or through agreed arrangements with local service providers.	Frequency of local and state government engagement.
Cons and Ops	Increased gender disparity, and potential intimidation of women due to larger numbers of men around the community	BMA's existing strategies to enhance gender diversity and manage workforce behaviour will be supported by initiatives the Community Development Strategy that deliver community participation and opportunities for women.	During construction and operations	No change to women's perceptions of safety in Moranbah as a result of Project construction or operation.	Community satisfaction with community development initiatives as measured through perceptions surveys.
Cons	Increased employment of women at the Project, including supervisors and managers through BMA's employment diversity strategies	BMA's workforce diversity strategies are addressed in Section 4.5.3. The Project will strongly enforce the code of conduct, and enforce the withdrawal of accommodation rights to any worker reliably reported to have affected public safety.	During construction and first two years of ops	No effect on community safety perceptions or statistics as a result of workforce behaviour. Well-informed stakeholders regarding behavioural standards. Increased numbers of female and Indigenous employees.	Progress towards increased participation for female employment. Complaints rate with respect to impacts to community lifestyle or values.

**Table 5-6 Community health and safety - Impacts, Opportunities and Mitigations**

Phase	Impacts and Opportunities	Social mitigation and enhancement strategies	Timing	Desired Social Outcomes	Indicators
Cons and Ops	Increased demand and stress on social infrastructure such as hospital services and emergency services	Engagement with health and emergency services providers to plan for potential increased load.	12 months prior to construction	Service provider feedback regarding rate of service demand.	Agreement with local service providers implemented.
	Enhanced opportunities for employment and income at regional and state level	Recruitment strategy. BLBP.	During construction and first two years of ops	Baseline rates of economic activity, income and employment are enhanced by the Project.	Value of workers' income and spending to regional economy.
	The number of non-residents in the Moranbah areas as a result of the Project may increase the likelihood of anti-social behaviour occurring	Reinforcement of positive behaviour and respect for local values, including withdrawal of accommodation rights for breaches.	During construction and first two years of ops	Stakeholders do not attribute a decline in existing regional community values, such as character, amenity, safety, or social capital to the Project.	Complaints rate with respect to workforce behaviour.
Cons and Ops	Risk that cumulative impacts of non-resident workers from a variety of projects and operations will decrease safety in Moranbah, dependent on consistent standards of workforce management, and sufficiency of police resources	Strategies address workforce behaviour management through targeted plans and policies described above.	During construction and first two years of ops	Negligible safety incidents or community safety complaints attributed to the Project. Adequate emergency service capacity to respond to all incidents identified as potential	Frequency of government and industry engagement regarding cumulative impact management.

Phase	Impacts and Opportunities	Social mitigation and enhancement strategies	Timing	Desired Social Outcomes	Indicators
	An increase in traffic or an increase in the risk of accident may require a corollary increase in the capacity of emergency services	Ongoing relationship with QPS and emergency services to implement Emergency Response Protocols o develop targeted strategies as required for training, e.g. positive behaviour-modelling and road safety needs.		risks by local emergency services	Local emergency services advise sufficient capacity to absorb Project demands. Number of Project-related road or traffic incidents.

**Table 5-7 Employment and Economic Development - Impacts, Opportunities and Mitigations**

Phase	Impacts and Opportunities	Social mitigation and enhancement strategies	Timing	Desired Social Outcomes	Indicators
Cons and Ops	Opportunity to increase workforce capacity for indigenous and other disadvantaged groups and BMA workforce diversity	Ensuring BMA's Indigenous training and recruitment strategies are applied early in workforce planning for the Project, and consistently applied in ongoing recruitment programs.	12 months prior to construction and during operations	Increased employment uptake by Indigenous personnel over time.	BMA / Project Indigenous employment participation rate above Indigenous representation in the region.
	Opportunity for Indigenous businesses in the region to benefit from supplying goods and services	Ensuring Project staff are aware of and committed to communicating business and supply opportunities to Indigenous organisations.	During construction and first two years of ops	Increased participation of Indigenous business in BLBP Program and supply opportunities.	BLBP contract award rate to Indigenous businesses above the rate of representation in the region's business profile.

Phase	Impacts and Opportunities	Social mitigation and enhancement strategies	Timing	Desired Social Outcomes	Indicators
Cons	BLBP and the general trade of non-resident workers are likely to provide a small stimulus to the local economy	BLBP in combination with the general trade of non-resident workers are likely to provide a small stimulus to the local, economy, which may result in increased local business trade, and potentially increased employment.	During construction and first two years of operations	Locally-awarded contracts associated with the Project, demonstrated through existing BMA public reporting of quarterly local buying activities for its northern Bowen Basin projects.	Number of locally-awarded BLBP contracts associated with the Project.
Cons and Ops	Equal opportunity for the employment of skilled labour from local or regional settings	Training strategy focussed on: <ul style="list-style-type: none"> <li>• Capacity development of training organisations that support that mining and related service industries;</li> <li>• Existing BMA strategies that target training and employment for training opportunities for young people, women and Indigenous people in the Isaac and MIW LGA; and</li> <li>• Lifelong learning and skill development programs that support workforce and employment diversity.</li> </ul>		Project employment opportunities are available to women, Indigenous people and those without prior experience in underground mining.	Rate of local and regional employment.

**Table 5-8 Social Infrastructure - Impacts, Opportunities and Mitigations**

Phase	Impacts and Opportunities	Social mitigation and enhancement strategies	Timing	Desired Social Outcomes	Indicators
Cons and Ops	Increased demand on ambulance, GPs, and Hospital are expected with significant consequence if not appropriately mitigated	Accommodation Village Management Plan, which includes emergency response procedures. Consultation with Moranbah GPs and Hospital to identify appropriate service provision strategy for workforce health.	During construction and first two years of ops	Project addressing the needs of its workforce through agreements reached with local service providers, or through provision of on-site medical staff.	Service-provision agreed with local medical service providers, and monitored through regular engagement.
	Increased demand on PAS, QAS and Fire Service in response to accommodation village call outs, traffic incidents, and wide load supervision	Engagement with local and regional police and emergency services, ahead of construction and operational commencement, to advise services of: <ul style="list-style-type: none"> <li>the anticipated workforce build up;</li> <li>major activities which would place demand on local services;</li> <li>behavioural standards; and</li> <li>communication protocols.</li> </ul>	During construction and first two years of ops	Good working relationship between the Project and QPS, QAS and QFRS in Moranbah.	Red Hill accommodation village call out rates, verified in consultation with emergency service providers.
		Orientation to the Red Hill accommodation village and its emergency response procedures.	During construction	Minimisation of demands on services as a result of on-site behavioural and safety management procedures.	
		Consultation with police and emergency services on the Project's Emergency Response Protocol.			



Phase	Impacts and Opportunities	Social mitigation and enhancement strategies	Timing	Desired Social Outcomes	Indicators
Cons and Ops	Opportunity to increase workforce participation in community volunteering and support initiatives	BMA will consult with local organisations regarding the existing capacity of community and civic service, and opportunities for BMA to invest in enhancement strategies, through its Community Development Strategy, in respect to identified impacts.	During construction	Project staff participate in local volunteer programs (e.g. annual volunteer day).	Community and stakeholder satisfaction monitored through bi-annual perception survey.
	Potential increased pool of participants for local fixtures and competitions	Provision of opportunities for scheduled sporting activities between town residents and workers during operations, to increase the size and vitality of local sporting competitions.	During operations	Participation of workers in community and sporting events.	Project participation rates in workforce/community recreational fixtures and competitions.

**Table 5-9 Housing - Impacts, Opportunities and Mitigations**

Phase	Impacts and Opportunities	Social mitigation and enhancement strategies	Timing	Desired Social Outcomes	Indicators
Housing					
Cons and Ops	Cumulative impacts and opportunities may see increases in service staff (e.g. police) or business employees and increased housing demands, dependent on the availability of housing stocks from 2020.	Cumulative impacts need to be addressed through collaboration between regional councils, state government agencies, resource companies and communities. Mitigation and monitoring of cumulative impacts will therefore require the involvement and coordination of multiple stakeholders.	During construction and first two years of ops	Demand for housing stock in Moranbah as a result of cumulative impacts are within existing capacity.	No increase in rental housing costs and availability as a result of the Project's stimulation of local businesses or other service requirements.

### 5.3.1 Significance Assessment

Assessment of the significance of social impacts and opportunities was undertaken using the Queensland Government's SIA Guideline criteria for likelihood (shown in Table 5-10) and consequence (Table 5-11).

**Table 5-10 Likelihood Criteria**

Rating	Likelihood
5	Very likely to occur or be an opportunity at either a specific stage of the project lifecycle or more broadly.
4	Likely to occur or be an opportunity at either a specific stage of the project lifecycle or more broadly.
3	Possible to occur or be an opportunity at either a specific stage of the project lifecycle or more broadly.
2	Unlikely to occur or be an opportunity at either a specific stage of the project lifecycle or more broadly.
1	Very unlikely to occur or be an opportunity at either a specific stage of the project lifecycle or more broadly.

**Table 5-11 Consequence Criteria**

Opportunity/Impact/Consequence				
1 - Incidental	2 - Minor	3 - Significant	4 - Major	5 - Severe
Local, small-scale, easily reversible change on social characteristics or values of the communities of interest or communities can easily adapt or cope with change. Local small-scale opportunities that the community can readily pursue and capitalise on.	Short-term recoverable changes to social characteristics and values of the communities of interest, or community has substantial capacity to adapt and cope with change. Short-term opportunities.	Medium-term recoverable changes to social characteristics and values of the communities of interest or community has some capacity to adapt and cope with change. Medium term opportunities.	Long-term recoverable changes to social characteristics and values of the communities of interest, or community has limited capacity to adapt and cope with change. Long term opportunities.	Irreversible changes to social characteristics and values of the communities of interest or community has no capacity to adapt and cope with change.

Table 5-12 summarises social impacts and opportunities considered possible, likely, or very likely as a result of the Project's construction or operation. Impacts are shaded blue, and opportunities are shaded green.

The assessment of likelihood (L) and consequence (C) in Columns 3 and 4 assumes the implementation of BMA's existing strategies at corporate and Project level, as detailed in Section 5.1. Significance of impacts and opportunities after implementation of social mitigation and enhancement strategies identified in the EIS has also been predicted, as shown in the final two columns.

The assessment indicates that, after implementing BMA strategies, Project strategies and social impact mitigations, the Project is unlikely to have any significant negative impacts on social values and conditions in the Moranbah area or Isaac LGA, and presents a number for opportunities for increased labour skills and employment. Key social indicators will be monitored to ensure the assessment is borne out (see Section 5.4), and to take any corrective actions required to address unexpected impacts.

**Table 5-12 Significance Assessment**

Phase	Impacts and Opportunities	Pre mitigation		Social mitigation and enhancement strategies	Post Mitigation	
		L	C		L	C
<b>Settlement patterns and directly affected properties</b>						
Cons & Ops	Interruption of business and on-farm employment Loss of social / family connectivity	5	3	<ul style="list-style-type: none"> <li>Compliance with the Land Access Code and Land Act provisions, including ensuring land owners' needs are considered.</li> <li>Compensation agreement</li> <li>Regular communication with affected land owners</li> </ul>	4	2
Cons & Ops	Potential to contribute to declining amenity for land owners near the Project	3	2	<ul style="list-style-type: none"> <li>Regular communication with adjacent land owners regarding construction plans, potential impacts, mitigation strategies and resolution of any complaints;</li> <li>Project-specific road use and traffic management strategies to effectively manage potential disruptions.</li> </ul>	2	1
Cons & Ops	Potential impacts to road conditions on Goonyella Access Road and Peak Downs Highway	3	3	<ul style="list-style-type: none"> <li>Regular communication with local residents and users of road and air transport regarding timing, potential changes to current conditions, mitigation strategies (e.g. traffic control), and resolution of any complaints.</li> </ul>	3	1
<b>Social and cultural values</b>						
Cons	Potential for increased non-resident workers to impact community perceptions of safety	3	2	<ul style="list-style-type: none"> <li>Workforce Code of Conduct and local values induction materials to manage workforce behaviour and encourage respect and integration with existing community values</li> <li>Engagement with QPS to monitor any changes to community safety issues</li> </ul>	2	1
Ops	Provision of support for community participation for young people	4	3	<ul style="list-style-type: none"> <li>Community development programs which encourage positive interactions between workers and community members</li> <li>Programs which strengthen young people's resilience e.g. leadership, mentoring and self-awareness)</li> </ul>	4	3
Cons	Cumulative issues that need to be addressed in concert with industry in the region	3	3	<ul style="list-style-type: none"> <li>Stakeholder and Community Engagement Plan including complaints management,</li> <li>Discussion with other industry representatives to encourage consistent high standards of behaviour for all projects' workforces</li> </ul>	2	2
<b>Demographic characteristics</b>						
Cons & Ops	Opportunity for industry to work with Council and Government staff to forecast population changes so services can be planned commensurate with growth	3	3	Strategies to mitigate potential impacts on population size include: <ul style="list-style-type: none"> <li>workforce management strategies;</li> <li>accommodation village provision</li> <li>enforcement of expected standards of behaviour; and</li> <li>monitoring of demands on local services</li> </ul>	2	2

Phase	Impacts and Opportunities	Pre mitigation		Social mitigation and enhancement strategies	Post Mitigation	
		L	C		L	C
Cons & Ops	Increased gender disparity	4	3	<ul style="list-style-type: none"> <li>BMA's existing strategies to enhance gender diversity and manage workforce behaviour</li> <li>Strong enforcement of the code of conduct, and enforce the withdrawal of accommodation rights to any worker reliably reported to have affected public safety.</li> </ul>	2	2
Ops	Increased employment of women at the Project, including supervisors and managers through BMA's employment diversity strategies	5	3	<ul style="list-style-type: none"> <li>BMA's workforce diversity strategies are addressed in Section 5.3.</li> </ul>	5	3
<b>Community health and safety</b>						
Cons & Ops	Increased demand and stress on social infrastructure such as hospital services and emergency services	4	3	<ul style="list-style-type: none"> <li>Engagement with health and emergency services providers to plan for potential increased load</li> </ul>	2	2
Cons & Ops	Enhanced opportunities for employment and income at regional and state level	4	3	<ul style="list-style-type: none"> <li>Recruitment strategy</li> <li>BLBP</li> </ul>	4	3
Cons	Increase in non-residents in the areas may increase the likelihood of anti-social behaviour occurring	4	3	Reinforcement of positive behaviour and respect for local values, including withdrawal of accommodation rights for breaches.	3	2
Cons & Ops	Risk that cumulative impacts from a variety of projects and operations will decrease safety in Moranbah	4	4	Strategies address workforce behaviour management through targeted plans and policies described above.	2	2
	Increase in traffic may require a corollary increase in the capacity of emergency services	4	3	<p>Ongoing relationship with Queensland Police and emergency services to:</p> <ul style="list-style-type: none"> <li>implement Emergency Response Protocols; and</li> <li>develop targeted strategies as required for training, e.g. positive behaviour-modelling and road safety needs.</li> </ul>	3	2
<b>Employment and Economic Development</b>						
Cons & Ops	Opportunity to increase Indigenous workforce capacity and BMA workforce diversity	4	3	<ul style="list-style-type: none"> <li>Ensuring BMA's Indigenous training and recruitment strategies are applied early in workforce planning for the Project, and consistently applied in ongoing recruitment programs.</li> </ul>	4	3
Cons & Ops	Opportunity for Indigenous businesses in the region to benefit from supplying goods and services	4	3	<ul style="list-style-type: none"> <li>Ensuring Project staff are aware of and committed to communicating business and supply opportunities to Indigenous organisations</li> </ul>	4	3

Phase	Impacts and Opportunities	Pre mitigation		Social mitigation and enhancement strategies	Post Mitigation	
		L	C		L	C
Cons & Ops	BLBP and the general trade of non-resident workers are likely to provide a small stimulus to the local economy	3	2	<ul style="list-style-type: none"> <li>BLBP in combination with the general trade of non-resident workers are likely to provide a small stimulus to the local, economy, which may result in increased local business trade, and potentially increased employment</li> </ul>	3	2
Cons & Ops	Opportunity for the employment of skilled labour from the region and Queensland	4	4	Training strategy focussed on: <ul style="list-style-type: none"> <li>Capacity development of training organisations;</li> <li>Existing BMA strategies that target training and employment for young people, women and Indigenous people in the Isaac and MIW LGA; and</li> <li>Lifelong learning and skill development programs that support workforce and employment diversity.</li> </ul>	5	5
<b>Social infrastructure</b>						
Cons & Ops	Increased demand on ambulance, GPs, and Hospital are expected with significant consequence if not appropriately mitigated	4	3	<ul style="list-style-type: none"> <li>Accommodation Village Management Plan, which includes emergency response procedures</li> <li>Consultation with Moranbah GPs and Hospital to identify appropriate service provision strategy for workforce health</li> </ul>	3	2
Cons & Ops	Increased demand on Police, QAS and Fire Service in response to accommodation village call outs, traffic incidents, and wide load supervision	4	3	<ul style="list-style-type: none"> <li>Engagement with local and regional police and emergency services, ahead of construction and operational commencement, as detailed in assessment</li> </ul>	3	2
Cons & Ops	Opportunity to increase workforce participation in community volunteering and support initiatives	3	2	<ul style="list-style-type: none"> <li>BMA will consult with local organisations regarding the existing capacity of community and civic service, and opportunities for BMA to invest in enhancement strategies, through its Community Development Strategy, in respect to identified impacts.</li> </ul>	4	3
	Potential increased pool of participants for local fixtures and competitions	3	2	<ul style="list-style-type: none"> <li>Provision of opportunities for scheduled sporting activities between town residents and workers during operations, to increase the size and vitality of local sporting competitions.</li> </ul>	4	2
<b>Housing</b>						
Cons & Ops	Cumulative impacts and opportunities may see increases in service staff and increased housing demands, dependent on the availability of housing stocks from 2020.	4	3	<ul style="list-style-type: none"> <li>Cumulative impacts need to be addressed through collaboration between regional councils, state government agencies, resource companies and communities. Mitigation and monitoring of cumulative impacts will therefore require the involvement and coordination of multiple stakeholders.</li> </ul>	3	2

## 5.4 Monitoring Framework

Section 4 identifies the status of baseline indicators in the study area, and Section 5 includes desired outcomes for each of the areas where significant social impacts and opportunities are anticipated.

Desired outcomes generally include:

- no negative impact on social indicators (such as access to housing, social and health infrastructure capacity, and community safety);
- increased opportunities, e.g. employment diversity and business participation;
- community satisfaction with mitigation and enhancement strategies; or
- informed stakeholders, who can participate in monitoring and managing impacts.

This section outlines how social indicators will be monitored to inform review of the desired outcomes, i.e. have mitigations been successful in avoiding a decline in social indicators, and contributed to positive changes.

### 5.4.1 Review prior to construction

BMA will review the social baseline and impact assessment 12 months prior to construction to ensure the assessment of impacts is accurate in the current context, and refine the social mitigation strategies proposed. Actions to be undertaken include:

- identification of emerging stakeholder or community concerns in relation to the Project;
- assessing the capacity of local social infrastructure and services and identify implications for on-site service provision or collaborative strategies with local service providers;
- reviewing skills availability for construction and operation, and developing appropriate training and recruitment strategies;
- engagement with IRC and DSDIP in relation to RARTP priority areas and opportunities for appropriate strategic investment;
- developing an evidence base of housing availability and affordability trends; and
- reviewing the status of key social indicators outlined in Table 5.10.

BMA will provide a copy of the review of social conditions and impacts to DSDIP, and consult with the Department on any changes required to mitigation measures.

### 5.4.2 Data monitoring and reporting

The indicators in Table 5-10 have been selected as representative of the Project's potential impacts and opportunities and their desired social outcomes, to form the basis of the monitoring framework. These indicators will be monitoring during the construction period and the first two years of operation.

BMA will provide a report on monitoring results to the Coordinator-General at the completion of construction of the GRM incremental expansion and the RHM expansion option, and during operations if requested by the Coordinator-General, describing:

- the status of social conditions outlined in Table 5.10;
- actions and adaptable management strategies to avoid, manage or mitigate Project-related impacts on social conditions and indicators;
- actions to enhance local employment, training and community and economic development opportunities;

- actions to avoid, manage or mitigate Project-related impacts on local community services, social infrastructure and community safety and wellbeing; and
- actions to inform the community about Project impacts and show that community concerns about Project impacts have been taken into account when reaching decisions.

**Table 5-13: Monitoring Desired Outcomes and Social Indicators**

Area	Desired Outcome	Indicator	Current status (2013)	Source	Freq.
Community values	No negative impacts on community life	Community satisfaction with BMA management of Project impacts on community life	Dissatisfaction with cumulative impacts of mining and cyclical changes	Complaints and feedback data BMA Community Perception Survey Data (most recent)	Twice yearly during construction only
Housing	No negative impact on rental housing cost or availability	No increase in the cost of rental housing in Moranbah attributable to GRM incremental expansion and the RHM expansion option	Rental costs decreased by 50-75% in Moranbah during 2012/13, but average costs are higher than Mackay	RTA registered bonds and rental costs RP, REIQ or equivalent data on rental costs	Twice yearly during construction, and annually for the first 2 years of operation
Social infrastructure	No negative impact of non resident workers on access to social and health services	Number of general practitioners in Moranbah relative to the Full Time Equivalent population being serviced	Good social infrastructure with enhancements planned GP: ERP currently adequate	Feedback from stakeholder engagement	Twice yearly during construction, and annually for the first 2 years of operation
Social characteristics	A good place for families	Comparison to Mackay and Queensland average family composition profile	Percentage of couple with children families +/- Qld average	Census data	At the end of construction, based on relevant census data
Community safety	No increase in offence rates as a result of the Project	Number of offences against the person in Moranbah, compared to Mackay and Queensland averages	Rates of offences in Moranbah compare favourably with trend data and, for some offence categories, with regional averages	Queensland Police Service data	Annually for construction, and annually for the first 2 years of operation
Economic Diversity	Opportunity for local businesses to supply the Project, and diversity in the Project's workforce	Number of Local businesses supplying GRM incremental expansion and the RHM expansion option Percentage of employees who are Indigenous or Women	BLBP actively and effectively involves local businesses in supply opportunities	BLBP data – number and value of supply contracts	As per QRC Code for Local Buying



### 5.4.3 Stakeholder engagement during monitoring

BMA undertakes engagement in its communities through:

- employment of full time Communities staff across the Bowen Basin;
- strategic engagement to address current issues, e.g. the current partnership with Government and industry stakeholders in addressing the availability of general practitioners in Moranbah;
- meeting every two months with IRC to review current and upcoming issues, and joint responses; and
- regular meetings with the Moranbah BCN, representing Council, community organisations, businesses and Government agencies.

Each of these engagement mechanisms is an opportunity to see feedback on impacts, opportunities and mitigations; however a structured process of engagement in monitoring will also be undertaken with the Moranbah BCN and Isaac Regional Council on an annual basis, to seek input to monitoring and reporting of local conditions and impacts.

### 5.4.4 Complaints resolution

As noted in the International Council on Mining and Metals good practice guideline for complaints management<sup>13</sup>, any large-scale project, even if managed to the highest standards, may cause local concerns. BMA believes that effective complaints management is integral to building communication, respect and trust between its operations and local communities. It also assists in detecting and addressing local concerns at an early stage. The process followed by BMA is as follows:

A verbal response on the facts identified and progress with the investigation will be provided to the complainant within 48 business hours (unless the complainant agrees otherwise), and a detailed written response will be provided within ten business days of the receipt of the complaint

Wherever possible, BMA will seek resolution to concerns through dialogue and joint problem solving with affected stakeholders. All personnel including contractors will be made aware of the existence and importance of the complaints mechanism in their on-boarding program, and how to direct a complaint.

BMA will utilise its established internal complaints register to record and report on all complaints that may be received during the construction and operation of the Project. The complaints register will be updated and maintained by BMA's Community Relations team.

The results of the complaints monitoring will be reported on a quarterly basis to the Moranbah BCN and the Isaac Regional Council. BMA will also verify community perceptions of GRM incremental expansion and the RHM expansion option and overall community safety, lifestyle and cohesion through a broad community perception survey, undertaken every two years.

<sup>13</sup> International Council on Mining and Metals (October 2009) *Handling and Resolving Local Level Concerns & Grievances – Pilot Version*, viewed at <http://www.icmm.com/page/15822/icmm-presents-new-guidance-note-on-handling-and-resolving-local-level-concerns-and-grievances>

## 6. References

Australian Bureau of Statistics (ABS) 2006. Basic Community Profile, 2006 Census Community Profile Series. Cat. No. 2001.0

- a. Belyando (S) (LGA 30600)
- b. Broadsound (S) (LGA 31700)
- c. Mackay (C) (LGA 34760)
- d. Mackay (SD) (340)
- e. Moranbah (SSC 36793)
- f. Nebo (S) (LGA 35700)
- g. Queensland (STE 3)

Australian Bureau of Statistics (ABS) 2011 Basic Community Profile, 2011 Census Community Profile Series. Cat. No. 2001.0:

- a. Isaac (R) (LGA33980)
- b. Mackay (R) (LGA34770)
- c. Moranbah (SSC31100)
- d. Queensland (STE 3)
- e. Whitsunday (R) (LGA37340)

Australian Bureau of Statistics (ABS) 2011, Census of Population and Housing: Socio-Economic Indexes for Areas (SEIFA), Australia, Cat. No. 2033.0.55.001:

- a. 'Isaac (R) (LGA33980)'
- b. 'Moranbah (SSC31100)'

BHP Billiton Mitsubishi Alliance (BMA) 2013, Red Hill Mining Lease Economic Impact Assessment, PriceWaterhouseCoopers, BMA, Australia.

Department of Community Services (DCS) 2013, 'Rural Fire Service: About', viewed 22 April 2013, <http://www.ruralfire.qld.gov.au/About/>

Department of Education, Employment and Workplace Relations (DEEWR) 2013, 'Skills Shortages Australia - Summary', Australian Government, viewed 15 May 2013, <http://foi.deewr.gov.au/documents/skill-shortages-summary>

Department of State Development Infrastructure and Planning (DSDIP) 2013:

- a. Regional and Resource Towns Action Plan
- b. Towards better community impact management for resource regions July 2013
- c. Social impact assessment: Guideline July 2013

Department of Local Government and Planning (DLGP) 2012, Mackay, Isaac and Whitsunday Regional Plan, Queensland Government: Brisbane.

Economic Development Queensland (EDQ) 2013. 'Bushlark Grove House and Land Packages', viewed 28 May 2013, <http://www.bushlarkgrove.com.au/?name=House-and-land-packages>

Economic Development Queensland (EDQ) 2013, <http://www.edq.qld.gov.au/economic-development-queensland/economic-development-queensland.html>

Franks, D, Brereton, D, Moran, C, Sarker, T & Cohen, T 2010, Cumulative Impacts: A Good Practice Guide for the Australian Coal Mining Industry, Centre for Social Responsibility in Mining and the Centre for Water in the Minerals Industry, Sustainable Minerals Institute, The University of Queensland, Brisbane.

International Council on Mining and Metals (October 2009) Handling and Resolving Local Level Concerns & Grievances – Pilot Version, viewed at <http://www.icmm.com/page/15822/icmm-presents-new-guidance-note-on-handling-and-resolving-local-level-concerns-and-grievances>

Isaac Regional Council (IRC) 2009, 'The Isaac Region 2020 Vision', viewed 25 April 2013, <http://www.isaac.qld.gov.au/web/guest/our-priorities>

James Cook University (JCU) 2011, 'Courses and Degrees', viewed 6 May 2013, <http://www-public.jcu.edu.au/courses/index.htm>

Office of Economic and Statistical Research (OESR) 2013:

- a. Bowen Basin Population Report, 2012, Queensland Treasury, <http://www.oesr.qld.gov.au/products/publications/bowen-basin-pop-report/index.php>
- b. Population Projections, 2011 edition (Queensland statistical areas level 2), <http://www.oesr.qld.gov.au/products/tables/index.php>
- c. 'Queensland Regional Profiles', Queensland Treasury, <http://statistics.oesr.qld.gov.au/qld-regional-profiles>

Office of Economic and Statistical Research (OESR) 2011, Index of Retail Prices in Queensland Regional Centres, May 2010, Queensland Treasury, Queensland Government, Brisbane.

Property Data Solutions (PDS) 2012, 'Sales Reports', viewed 6 June 2013, <http://www.pdslive.com.au>

Queensland Ambulance Service (QAS) 2013, 'Central Region', Department of Community Safety, State Government, viewed 8 May 2013, <http://www.ambulance.qld.gov.au/central/>

Queensland Resources Council (QRC) 2013, 'Queensland Resources and Energy Sector Code of Practice for Local Content (2013)', viewed 1 July 2013, [https://www.qrc.org.au/01\\_cms/details.asp?ID=3209](https://www.qrc.org.au/01_cms/details.asp?ID=3209)

Queensland Resources Council (QRC) 2011, 'Queensland Resource Sector State Growth Outlook Study', viewed 12 December 2012, Deloitte Access Economics Pty Ltd, Brisbane.

Queensland Places 2011 viewed at 13 May 2013 <http://queenslandplaces.com.au/>

- a. 'Belyando'
- b. 'Broadsound'
- c. 'Moranbah'
- d. 'Nebo',

Queensland Police Service 2013

Online Crime Statistics, viewed 1 July 2013

<http://www.police.qld.gov.au/forms/CrimeStatsDesktop.asp>, Queensland Government

Police Service Personnel Profile,

<http://www.police.qld.gov.au/Resources/Internet/services/reportsPublications/statisticalReview/1112/documents/Personnel.pdf>

Reported Offences Moranbah Police Division, Isaac Regional Council LGA, Mackay Regional Council LGA, Information Resource Centre, Information and Community Technology, Queensland Government

Rental Tenancies Association (RTA) 2013, 'Median Rents', viewed 13 May 2013, <http://www.rta.qld.gov.au/Resources/Median-rents.aspx>

Urban Land Development Authority (ULDA) 2011, Moranbah and Blackwater: Social, Cultural and Community Infrastructure Analysis, Plan C, East Brisbane.

## Appendix A – BMA Consultation (2012-2013)

### Stakeholders consulted (2012-2013)

Group	Number of representatives	Organisation
Landholders adjacent to the project	3	Private landowners
Traditional owners' representatives	4	Jangga People
	2	Wiri 2 Aboriginal Party
	3	Wiri People Core Country
	1 <sup>1</sup>	Woorra Consulting
<b>Interested parties</b>		
Community service providers	4	Moranbah Medical Centre
	1	Moranbah General Practitioner
	1	Emergency Long Term Accommodation Moranbah
	1 <sup>1,2</sup>	Moranbah and District Support Services
	1	Moranbah ASD Support Group
	1	Moranbah Community Centre
	1	Moranbah Kindergarten
	2	Simply Sunshine Childcare
	2	Central Queensland Rescue Chopper
	1	Mackay Community Health Centre
	1	Domestic Violence Resource Centre
	1	Mackay Disability Services
	1	Mackay Regional Social Development Centre
	2	Central Highlands Dental Surgery
	1	Construct Health Moranbah
Business and industry groups	1 <sup>1</sup>	Moranbah Newsagency
	1 <sup>2</sup>	Moranbah Traders Association
	4	Mackay Chamber of Commerce
	1	Mackay Whitsunday Regional Economic Development Corporation
	1	Central Highlands Development Corporation
	1	Skills DMC
	1 <sup>2</sup>	Queensland Minerals and Energy Academy
	1	Mackay Regional Tourism Ltd
<b>Government</b>		
Commonwealth Government elected representatives	1	Member for Dawson

Queensland Government agencies and elected representatives	1	Member for Mackay
	1	Queensland Department of Education, Training and Employment
	8	Department of Economic Development Queensland (formerly the Queensland Department of Employment, Economic Development and Innovation)-
	1	Queensland Department of Environment and Resource Management - Regional Planning and Coordination
	6	Department of Communities, Child Safety and Disability Services – Mackay and Brisbane
	1	Queensland Department of Local Government and Planning – Mackay area
	2	Skills Queensland - Workforce Management Plans
	2 <sup>1,2</sup>	Moranbah East State School
	2 <sup>1,2</sup>	Moranbah State High School
	2 <sup>1</sup>	Moranbah Hospital
	4	Queensland Ambulance Service – Moranbah and Central Region
	4 <sup>2</sup>	Queensland Health – Moranbah and Mackay Region
	7	Queensland Police Service – Moranbah, Central Region, Mackay District and Brisbane
	2	Queensland Fire and Rescue Service – Moranbah and Mackay Country
	1	Queensland Mental Health and Alcohol, Tobacco and Other Drugs Services – Mackay
Regional council departments and elected representatives	3	Cairns Regional Council
	2	Mackay Regional Council
	10 <sup>1,2</sup>	Isaac Regional Council

Note 1: Indicated organisation has representation at Growth Projects BCN

Note 2: Indicates organisation has representation at Moranbah BCN