

# SARAJI EAST MINING LEASE PROJECT

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Environmental Impact Statement

## Chapter 17 Social

**BHP**

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# Saraji East Mining Lease Project

## 17 Social

### 17.1 Introduction

This chapter is a summary of the Social Impact Assessment (SIA) (**Appendix L-1**) which was prepared for the Project.

The objectives of the SIA are to:

- define the SIA Study Area, having regard to the Project's social context, the *Strong and Sustainable Resource Community Act 2018* (SSRC Act) and the Queensland Department of State Development, Manufacturing, Infrastructure and Planning (DSDMIP) *Social Impact Assessment Guideline* (March 2018)
- identify SIA stakeholders and undertake an inclusive stakeholder engagement program to inform assessment of the social baseline, social impacts and community benefits
- ensure the baseline, assessment and mitigations are focussed on the impacts and benefits that are likely and would affect the social environment
- provide a comprehensive baseline of social conditions based on qualitative and quantitative data
- provide a detailed assessment of the positive and negative impacts of the Project's activities on the social environment for each Project stage
- evaluate the significance of impacts and benefits for social conditions, including sufficient information to enable local and state agencies to determine effects on their operations or planning
- develop mitigation measures and management plans to enable the Project to have positive social outcomes, including measures which create or enhance socio-economic benefits
- provide a monitoring and reporting strategy to support adaptive management of social impacts.

For the purposes of this assessment, the SIA Study Area is defined as the towns most likely to be affected by the Project, which include Middlemount, Dysart and Moranbah, and the Isaac Local Government Area (LGA) refer Figure 17-1.

It should be noted that BMA included an operational accommodation village within the scope of the Project at the commencement of the EIS, but following consideration of SIA-related consultation with the OCG (i.e. administering agency of the SSRC Act) and the IRC after the completion of this section of the EIS it became evident to BMA that these key stakeholders did not agree that the proposed operational village was warranted. As a result, BMA is not further pursuing approval of the operational village as part of the EIS process. This chapter has been amended to reflect the changes in **Appendix L-1 Social Impact Assessment**.

However, as part of a conservative approach, the potential environmental impacts associated with the construction and operation of the operational accommodation have been considered as part of this EIS.

## 17.2 Legislation and policy

### 17.2.1 Environmental Protection Act

The Project will be assessed under the *Environmental Protection Act 1994* (EP Act) which is administered by the Queensland Department of Environment and Science (DES).

The EP Act's objective is to 'protect Queensland's environment while allowing for development that improves the total quality of life, both now and in the future, in a way that maintains ecological processes (ecologically sustainable development)'. The EP Act and its associated regulations and policies (air, noise and water) provide a regulatory framework for integrated management of activities with the potential to affect the environment, which includes:

- (a) ecosystems and their constituent parts, including people and communities
- (b) all natural and physical resources
- (c) the qualities and characteristics of locations, places and areas, however large or small, that contribute to their biological diversity and integrity, intrinsic or attributed scientific value or interest, amenity, harmony and sense of community
- (d) the social, economic, aesthetic and cultural conditions that affect, or are affected by, things mentioned in paragraphs (a) to (c).

The Terms of Reference (ToR) for the Environmental Impact Statement (EIS) were finalised and issued to the proponent on 2 June 2017.

### 17.2.2 Strong and Sustainable Resource Communities Act

The SSRC Act commenced on 30 March 2018 and sets out the requirements for an SIA under the EP Act and the *State Development Public Works Organisation Act 1971* (SDPWO Act), to be regulated by the Queensland Coordinator-General.

The SSRC Act's object is to ensure that residents of communities in the vicinity of large resource projects benefit from the construction and operation of those projects, supported by three key elements which are:

- prohibition of 100 per cent fly in fly out (FIFO) workforce arrangements on operational large resource projects
- prevention of discrimination against locals in the future recruitment of the workforce
- the requirement for an SIA.

The SSRC Act applies to 'large resource projects' that have a 'nearby regional community'. The Project is considered a large resource project with a nearby regional community and is therefore assessed under the SSRC Act.

The SSRC Act requires that large resource projects conduct a SIA in accordance with the *SIA Guideline* (DSDMIP, 2018). Core matters as defined by the SSRC Act to be addressed in the SIA include:

- to prioritise recruitment from the local community first, followed by recruiting from regional communities
- the requirement for the proponent of the Project to consult with the relevant local government
- enforcement provisions for conditions stated by the Coordinator-General to manage the social impacts of a project.

### 17.2.3 Social Impact Assessment Guideline

The *SIA Guideline* (DSDMIP, 2018) requires the assessment to address the following:

- consider the core matters and all proposed stages of the Project
- provide sufficient level of detail for the Project, the sensitivity of the social environment and the likely scope and significance of the Project's social impacts
- undertake inclusive and transparent engagement with stakeholders (including IRC and communities)
- detail key stakeholders and provide a description of how the potentially impacted communities and stakeholders were consulted during the development of the SIA
- provide a comprehensive social baseline study of potentially impacted communities, including demographic indicators, community values, community history, community health and well-being, key industries, the local and regional workforce, access to social facilities and services, housing and accommodation, and details of other resource and infrastructure projects in the area
- assess both impacts and opportunities related to the Project
- consider the social consequences of other matters assessed in the EIS
- provide a Social Impact Management Plan (SIMP) which details proposed management measures, and a monitoring and reporting framework.

### 17.2.4 Regional Planning Interest Act

The *Regional Planning Interest Act 2014* (RPI Act) identifies and protects areas of Queensland that are of regional interest in order to 'manage the impact and support coexistence of resource activities and other regulated activities in areas of regional interest' (Queensland Government 2017a). Areas of regional interest include Priority Living Areas (PLAs), quality agricultural areas and strategic cropping land.

The Project is not likely to directly affect PLAs, however social impacts relevant to urban areas designated as PLAs have been considered in this assessment. Agricultural and cropping areas of regional interest are described in **Chapter 5 Land Resources**.

### 17.2.5 Planning Act

The Queensland *Planning Act 2016* (Planning Act) established a new planning system which encompasses plan making, development assessment and dispute resolution. The majority of the Project Site is located within the former Broomsound Shire Council LGA, with a small extent of the northern Project Site within the former Belyando Shire Council LGA. Pending publication of a draft IRC planning scheme, the Broomsound Shire Planning Scheme, the Nebo Shire Planning Scheme and the Planning Scheme for the Belyando Shire remain in effect. Development activities which are within local government's authority include assessment of Development Applications (DA) for areas outside of Mining Leases (MLs) and any planning scheme amendments required to facilitate the Project.

### 17.2.6 Mackay Isaac and Whitsunday Regional Plan

The Isaac LGA is part of the *Mackay Isaac Whitsunday (MIW) Regional Plan 2012*. The Regional Plan's goals for MIW communities include:

- the development of resilient and cohesive communities with distinct character
- recognising and fostering existing community values, including character, cultural heritage, diversity, amenity, safety, access, and social capital
- retain regionally unique built and natural assets
- 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 healthy communities
- manage cumulative social impacts that result from development, particularly mining projects
- increase the capacity and variety of social infrastructure and service (including community, cultural, educational, health and recreational facilities).

These goals were considered in preparation of the SIA.

### 17.2.7 Isaac LGA values

In April 2015, IRC adopted *Isaac 2035*, a Community Strategic Plan (IRC 2015) which aims to strengthen the region across four key areas:

- improving essential infrastructure
- diversifying the economy
- supporting communities
- protecting the natural environment.

*Isaac 2035's* key goal is that in 2035, the Isaac LGA will have strong and diverse communities that support all to live, work and raise families. Actions supporting this goal include:

- providing safe and cost-effective community facilities and venues
- providing a range of services to cater for the diverse needs of communities
- partnering with a range of stakeholders to build self-sustainable community groups
- delivering programs and services that promote community safety and wellbeing
- celebrating communities and their uniqueness.

## 17.3 Methodology

This section summarises the SIA methodology. More detail is provided in **Appendix L-1 Social Impact Assessment**.

### 17.3.1 Scoping

The SIA scoping process considered regulatory requirements, the Project's location, characteristics of local communities and regions, and IRC's inputs on potential social impacts and opportunities.

A review of recent research, local, regional and state plans and policies, and social impact assessments relevant to the SIA Study Area was undertaken.

The assessment took into account a number of Project related assumptions. The Project is likely to employ up to 1,000 personnel during its construction (assumed for the purposes of this assessment to commence in Financial Year (FY) 2021) and up to 500 personnel at full operational development (assumed to be achieved by FY 2025). Employment numbers are full time equivalent (FTE) estimations. Project personnel will be given the option of locally based employment or commuting arrangements.

### 17.3.2 Stakeholder engagement

The SIA stakeholder engagement process included meetings with OCG and IRC to seek feedback on the SIA scope, and consultation with the IRC, community members and organisations, state agencies and businesses to:

- verify the social baseline
- discuss the Project's potential impacts and benefits
- obtain input to the impact assessment and mitigations.

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

- the SIA Study Area's history and settlement pattern
- community values in the SIA Study Area
- population size, composition and growth
- housing and accommodation availability and affordability
- community health and safety indicators
- employment, labour force and skills
- business and industry in the region
- social infrastructure provision.

State Suburbs include urban centres and rural localities and were chosen as the smallest statistical area for analysis. Data for Statistical Area 2 (SA2s) were used where data were not available at State Suburb level. The Moranbah SA2 aligns to the Moranbah State Suburb, and the Broadsound-Nebo SA2 includes Dysart, Middlemount, Coppabella, Nebo and Glenden.

The IRC LGA and broader region are the key focus of the SIA as they are most likely to benefit from or be impacted by labour participation or Project supply chains.

### 17.3.3 Social impact assessment

All potential social impacts and benefits were considered in terms of whether they were likely to make positive or negative changes to local and regional social conditions. Quantitative modelling of social impacts was undertaken in respect to population changes, housing demands, employment opportunities and social infrastructure. Inputs to the modelling included the existing population, housing and employment characteristics, and assumptions regarding the local/regional mix of future employees and contractors.

For impacts on community values such as local character and community cohesion, stakeholder views were documented, and professional judgement applied in relation to the likelihood of changes to social values.

The SIA included a cumulative assessment, with a focus on population impacts, housing, social infrastructure, community values and employment opportunities.

At the conclusion of the impact assessment stage, a two-stage significance assessment was undertaken. Firstly, BMA's existing impact management, mitigation and engagement commitments were considered in evaluating the likelihood and severity of potential impacts, and a final significance assessment was undertaken after applying the SIA's proposed mitigation, management and enhancement strategies.

Potential residual impacts were identified and rated. Mitigation and monitoring strategies were then developed for all social impacts with potential to negatively affect social indicators or community values.

### 17.3.4 Stakeholder inputs

Stakeholders in the potentially affected communities have significant experience with the social impacts and benefits of mining projects, and with the cyclical nature of the mining industry. As a result, they have a high capacity to provide informed input on potential social impacts and benefits, and how they should be managed.

Stakeholders have also experienced the demands of participating in assessment of multiple projects in the Isaac region over several years, leading to engagement fatigue, and some local property owners are dealing with requests from multiple companies and uncertainty about whether projects will proceed.

The process for SIA stakeholder engagement is shown in Table 17.1.

**Table 17.1 SIA engagement stakeholders and engagement strategies**

Stakeholder	Engagement strategies
OCG and Department of Environment and Science (DES)	<ul style="list-style-type: none"> <li>OCG Meeting (March 2018) - SIA scope and process</li> <li>Provision of SIA scope for DES review (April 2018)</li> <li>Provision of preliminary draft SIA for review (March 2019)</li> <li>Discussion of draft SIA (May 2019)</li> </ul>
Land owners	On property meetings with two affected landholders (June 2018)
IRC	<ul style="list-style-type: none"> <li>Meeting 1 (June 2018) – Discussion of SIA study area, matters to be addressed and issues of importance to Council (see Section 2.6)</li> <li>Meeting 2 (July 2019) – presentation and discussion of draft SIA and SIMP</li> </ul>
Barada Barna people	SIA enquiry framework provided for BMA meeting with BBAC (July 2018)
Local community members and businesses	<ul style="list-style-type: none"> <li>Community information about the Project and SIA (June 2018) (fact sheets and feedback forms)</li> </ul>



Stakeholder	Engagement strategies
	<ul style="list-style-type: none"> <li>Local community and business workshops (June 2018) in Moranbah, Dysart and Middlemount</li> </ul>
Social and health infrastructure providers	<ul style="list-style-type: none"> <li>Community workshop participation (June 2018)</li> <li>Phone interviews (July 2018)</li> </ul>
Government agencies	Workshop participation (June 2018) <ul style="list-style-type: none"> <li>Moranbah Hospital</li> <li>Dysart Police</li> <li>Middlemount Community School</li> </ul> Interviews (June-July 2018) <ul style="list-style-type: none"> <li>Moranbah State School</li> <li>Moranbah East State School</li> <li>Moranbah Police</li> <li>QFES, Mackay Country Command</li> </ul>
Unions	Email project information and invitation to SIA workshop <ul style="list-style-type: none"> <li>Construction, Forestry, Maritime, Mining and Energy Union (CFMEU)</li> </ul>

## 17.4 Description of environmental values

This section details the existing social conditions and indicators in the potentially affected communities, including the labour force and business characteristics of the broader region.

### 17.4.1 Surrounding land uses

Land uses surrounding the Project Site include:

- rural residential dwellings (homesteads)
- agricultural activities including cattle grazing, some dryland crops and farming infrastructure (access tracks, fences, stockyards and sheds)
- biophysical elements (such as the Isaac River and associated tributaries)
- mining and coal exploration activities.

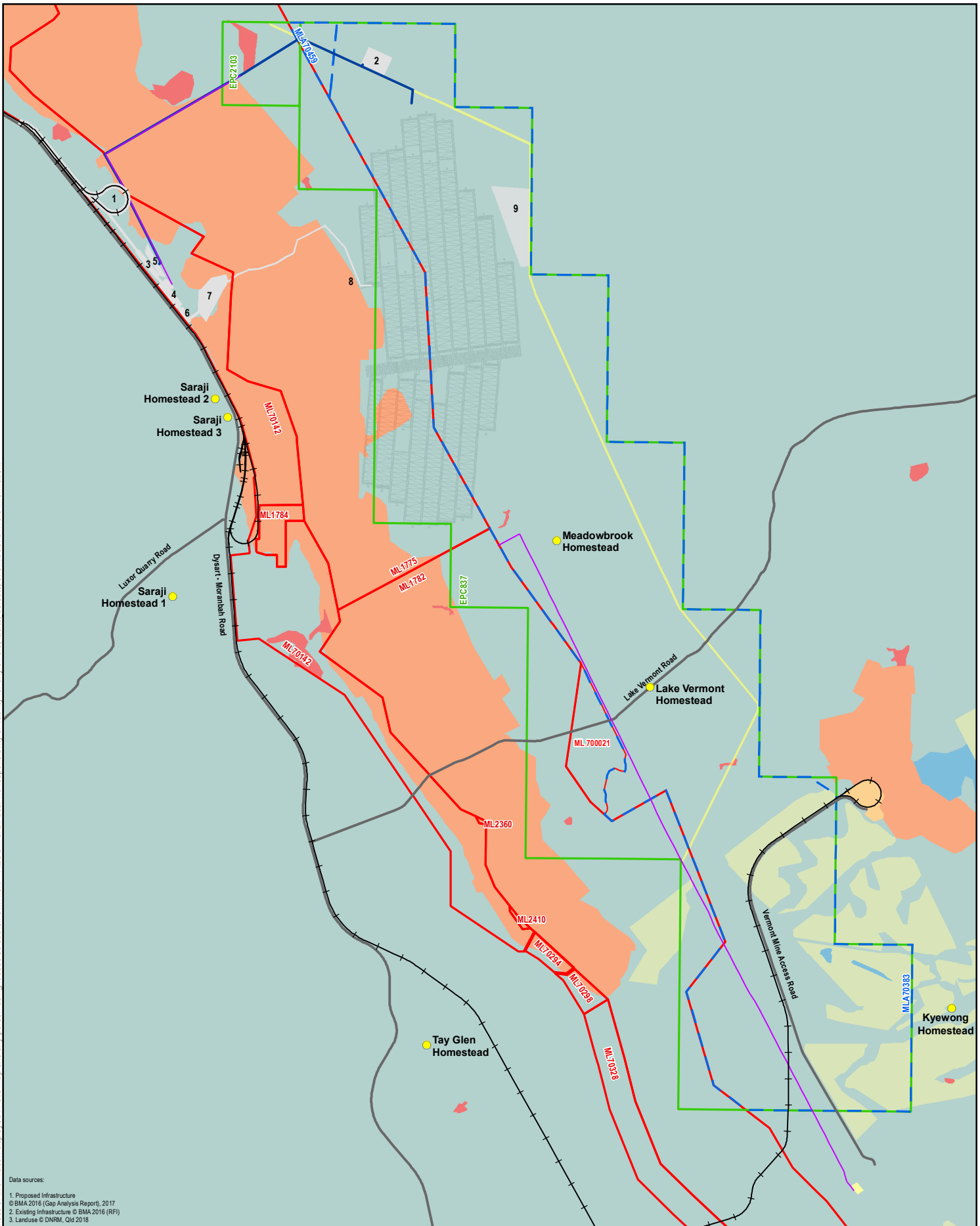
There are seven sensitive receptors (homesteads) located within and in close proximity of the Project Site Table 17.2 and Figure 17-2.

BMA is the owner of the two homesteads likely to be directly affected by the Project (Lake Vermont Homestead and Meadowbrook Homestead, which are both located within the Project Site) and holds commercial agreements with Saraji Homestead 2 and Saraji Homestead 3. Discussions concerning a co-existence agreement between BMA and owners of Saraji Homestead 1 have commenced.

Table 17.2 Identified sensitive receptors nearest to the Project

Receptor	Ownership
Kyewong Homestead	Private landholder
Lake Vermont Homestead	BMA
Saraji Homestead 1	Private landholder
Saraji Homestead 2	Private landholder
Saraji Homestead 3	Private landholder
Tay Glen Homestead	Private landholder
Meadowbrook Homestead	BMA

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#### LEGEND

- |  |   |   |
|--|---|---|
| <ul style="list-style-type: none"><li>Homestead</li><li>Public Road</li><li>Existing Railway</li><li>66kV Powerline</li><li>Pipeline</li><li>Rail Loop</li></ul> | <b>QLUMP Secondary Land Use</b> <ul style="list-style-type: none"><li>Other minimal use</li><li>Grazing native vegetation</li><li>Cropping</li><li>Utilities</li><li>Transport and communication</li><li>Mining</li><li>Reservoir/dam</li></ul> | <ul style="list-style-type: none"><li>Underground layout (optimised)</li><li>Transport and Infrastructure Corridor</li><li>Surface Infrastructure</li></ul> <b>Mining Tenement</b> <ul style="list-style-type: none"><li>Exploration Permit Coal (EPC)</li><li>Mining Lease (ML)</li><li>Mining Lease Application (MLA)</li></ul> |
|--|---|---|

- Rail Loading Balloon Loop
- Process Water Dam
- Product Stockpiles
- CHPP
- Raw Water Dam
- ROM Pad
- Future MIA
- Conveyor
- Construction Village



**Figure 17-1**  
**Project Layout**  
**and Surrounding Land Use**

Environmental Impact Statement  
Saraji East Mining Lease Project



Scale: 1:110,000 (when printed at A4)

Projection: Map Grid of Australia - Zone 55 (GDA94)

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## 17.4.2 Potentially affected communities

In defining the SIA Study Area highlighted on Figure 17-1, all potentially affected communities with more than 200 people which are within a direct 125 km radius of the Project's access points were considered.

Communities located nearest to a project have the highest potential for direct social impacts and benefits, whilst supply chain considerations such as labour force origin and businesses' capacity to supply the Project are relevant to the broader region.

The Isaac LGA was the primary LGA for consideration in the SIA. Dysart, Moranbah and Middlesbrough were considered most likely to be impacted by the Project as:

- their labour forces have significant strengths in the mining industry and are likely to supply the Project
- personnel and their partners relocating from other regions will choose to live in towns which have better housing choice, housing availability and social infrastructure provision
- employment is likely to be attractive to personnel in towns within a shorter travel time
- non-local personnel staying in accommodation villages are likely to access services and businesses in Moranbah and Dysart
- BMA has established relationships with the towns of Moranbah and Dysart, which maximise community benefits and minimise social impacts.

All suitably skilled people, wherever they live, will be eligible to seek Project employment however personnel whose work day would extend beyond 14 hours (including a 12 hour shift and driving time) will need to sleep within a one hour driving time when they are rostered on. This will reduce the likelihood of impacts such as population increases, housing demand, and social infrastructure requirements in towns other than Moranbah, Dysart and Middlesbrough.

Nebo, Tieri, Capella, Glenden and Clermont may also have capacity to supply labour and supplies Project, but are unlikely to experience significant social impacts given a driving distance of one to two hours from the Project. Emerald also has strengths in the construction and mining sectors, but is almost two hours' drive away and is unlikely to attract Project personnel to live there, or experience other social impacts as a result of the Project.

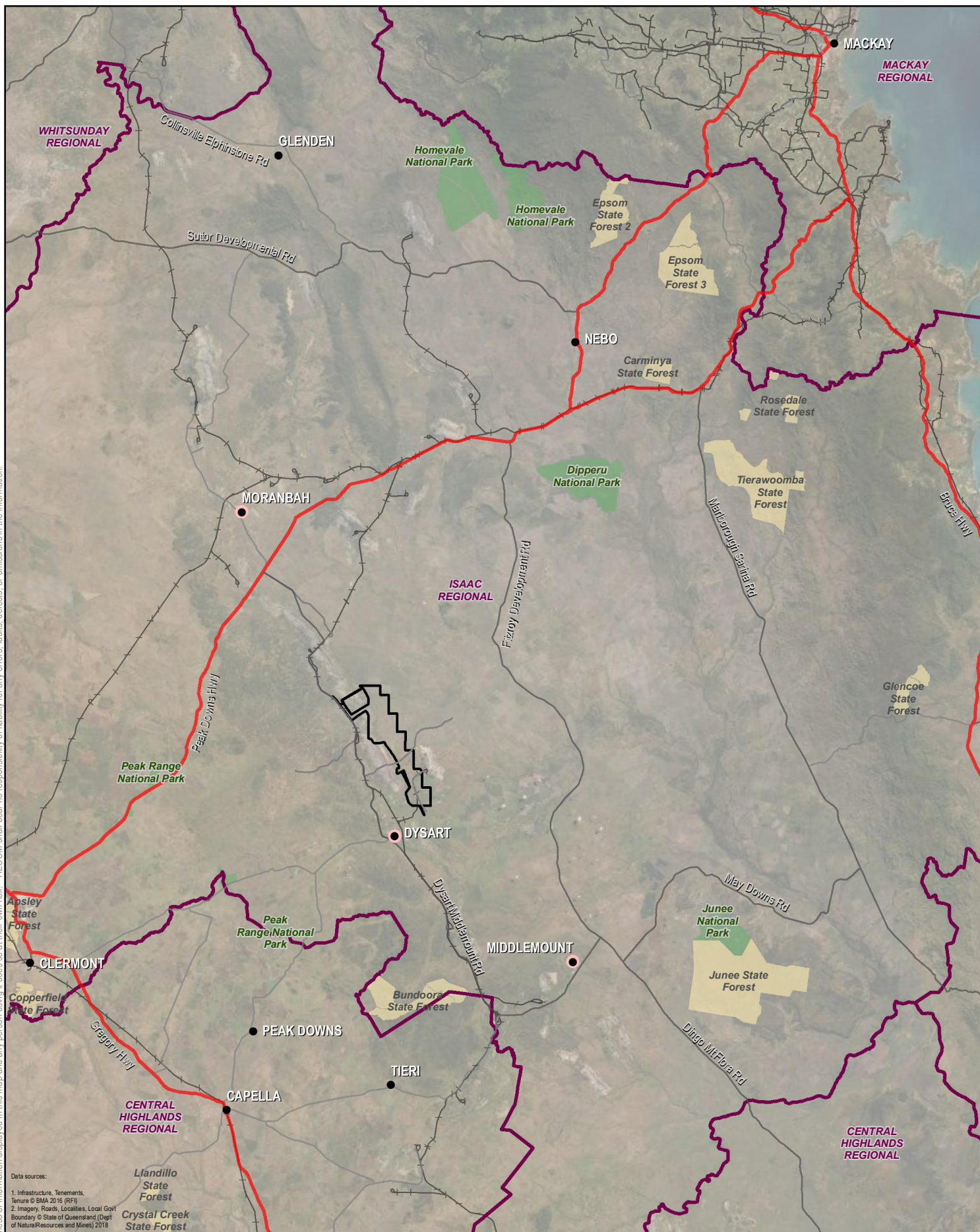
On the basis of these considerations, the local communities on which the SIA will focus are shown in Table 17.3. The capacity of businesses in other nearby communities to participate in Project supply chains is discussed in the SIA, as is labour force capacity at the broader regional as outlined below.

**Table 17.3 Potentially affected communities**

Community	2016 Population
Dysart	2,991
Moranbah	8,735
Middlesbrough	1,841
Isaac Regional Council LGA	20,940

Figure 17-2 shows the location of the Project in context with nearby communities and the Isaac LGA.





- LEGEND**
- Project Site
  - Locality
  - SIA Study Area
  - Highway
  - Major Road
  - Other Road
  - Local Government Areas
  - National Park
  - State Forest
  - +— Rail Network



**Figure 17-2  
Regional Context**

**Environmental Impact Statement  
Saraji East Mining Lease Project**

0 4.25 8.5 17  
Kilometres

Scale: 1:1,000,000 (when printed at A4)

Projection: Map Grid of Australia - Zone 55 (GDA94)

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### 17.4.3 Broader region

The Mackay Statistical Area 4 (SA4 (which equates to the MIW) and the Central Queensland SA4 (which includes the Rockhampton, Banana, Central Highlands, Woorabinda, Gladstone and Livingstone LGAs) have considerable strengths in the mining and construction industries and are likely to be a source of Project labour. The SIA therefore includes a focus on labour force capacity in these two regions.

Mackay, the MIW's regional centre, has considerable strengths in the mining and construction industries, and has been a long term provider of supplies and services to mining operations in the Bowen Basin.

The Project is likely to provide benefits to the State of Queensland in respect to royalties, taxes and employment opportunities over its 20 year production schedule, as assessed in **Chapter 18 Economics**. Queensland has been used as the comparative area for analysis of social indicators and labour supply in the Project's local and regional communities.

### 17.4.4 Social baseline

**Appendix L-1 Social Impact Assessment** provides a detailed description of the SIA Study Area's social baseline by documenting the social environment, social conditions and local and regional values. It includes:

- settlement pattern and social land uses
- community values and history
- demographic characteristics and projections
- community health and wellbeing
- social infrastructure
- housing and accommodation.

Social values and conditions identified through consultation, research and analysis are summarised in Table 17.4.

In particular, the Australian Bureau of Statistics (ABS) and Queensland Government Statistician's Office (QGSO) were consulted for existing social baseline data (ABS 2008, 2011, 2016, 2017; QGSO 2015, 2016, 2017, 2018).

**Table 17.4 Summary of social baseline in SIA Study Area**

Social condition/value	Status
<b>Settlement patterns</b>	
Properties near the Project Site	Two cattle breeding properties – Meadowbrook and Lake Vermont – may be directly affected by the Project. BMA is the owner of both of these properties.
Local land owner values	Existing uses in the immediate area include grazing and rural uses.
Local and regional settlement patterns	The Project is located approximately 167 km south west of Mackay, which is the principal service and activity centre for the MIW region. Moranbah, Dysart and Middlesboro were established as purpose-built towns to accommodate mining personnel and their families, so the settlement pattern in and near these towns has been directly determined by the mining industry.

Social condition/value	Status
Native title	The Project is within the traditional country of the Barada Barna people. The Project Site is not within an area held under native title, however BMA has discussed the Project with the Barada Barna Aboriginal Corporation (BBAC) and will include the Project as part of its portfolio for ongoing discussion with BBAC.
<b>Demographic characteristics</b>	
Population size and growth	The Isaac LGA had an estimated resident population (ERP) of 20,034 people as at 30 June 2018. Each of the local communities in the SIA Study Area experienced a decrease in population during 2011-2016. With the recent increase in mining industry activity, population growth is likely to be stronger during the next five years.
Indigenous population	Indigenous people represented 3.6 per cent of the Isaac LGA population in 2016 (up from 2.7 per cent in 2011), compared to 4 per cent of the Queensland population (up from 3.6 per cent in 2011).
Non-resident population	The Isaac LGA's FTE population was estimated at 31,835 people at June 2017, of whom 10,580 (33.2 per cent) were non-resident personnel, an increase of 1,130 non-resident personnel since June 2016. By June 2018, a small decrease in the residential population and a small increase in non-residential personnel saw the percentage of residents decrease to 63.5%.
Age	The potentially affected communities have a younger than average population. In 2016, the median age in Dysart, Moranbah and Middlesboro was lower by 6-7 years than the Queensland median of 37 years.
Cultural diversity	The proportion of residents that were born overseas was relatively low (at 10 per cent of the LGA's population) compared to the Queensland average (21.6 per cent).
Family characteristics	There is a higher proportion of family households in the Isaac LGA (73.9 per cent) compared with the Queensland average (71.8 per cent).
<b>Social and cultural values</b>	
Culture and identity	<p>Stakeholder inputs during the SIA workshops and interviews indicated that:</p> <ul style="list-style-type: none"> <li>• each community identifies as a mining community in a rural setting</li> <li>• there is a strong community spirit with residents who participate in and facilitate events, albeit with limited human resources to support events and sporting clubs</li> <li>• there is a strong desire to increase the populations of all towns, to increase community vitality, business trade and the diversity of services, businesses and entertainment</li> <li>• community sentiment is that new mining operations are supported</li> <li>• communities wish to be less dependent on mining companies for social infrastructure and employment.</li> </ul>
Community cohesion and resilience	<p>IRC has a strong planning and implementation focus on community resilience and economic diversity. Consultation with IRC for the SIA identified current goals as relevant to the Project including:</p> <ul style="list-style-type: none"> <li>• a strong preference for maximising local employment opportunities</li> <li>• ensuring that both residents and non-resident personnel are treated equitably in relation to service provision (e.g. emergency and health services)</li> <li>• ensuring the LGA's waste management and water supply infrastructure are adequate to the needs of residents, local business and mining companies</li> </ul>



Social condition/value	Status
	<ul style="list-style-type: none"> <li>supporting local business participation to Project opportunities.</li> </ul>
<b>Training, employment and local business</b>	
Attainment of education	In 2016, 42.7 per cent of Moranbah's population over 15 years had completed Year 12 (or equivalent) as their highest level of schooling, which was lower than the State average of 52.2 per cent. The percentage of Isaac LGA residents with a qualification was higher than the Queensland average, with a very high percentage of certificate qualified residents, reflecting the high number of people with trade qualifications.
Schools	The SIA Study Area is serviced by three primary public schools, two secondary schools and one P-12 community school. These schools indicated that new enrolments are welcome and schools have capacity for increased enrolments, with adequate notice of workforce ramp-up and population increases.
Further education and training	The Isaac LGA has no local access to university courses, however there are several local training services and facilities with a focus on training for employment in the mining industry. In January 2018, BMA welcomed its largest intake of local apprentices in several years, with 40 new apprenticeships created across its Bowen Basin mines.
<b>Community health and safety characteristics</b>	
Health	Findings from a review of relevant demographic, socio-economic and population health statistics for the Isaac LGA indicate relatively low levels of socio-economic vulnerability to ill health. There are, however, a higher percentage of obesity and high blood pressure compared with the Queensland average.
Mental health	Analysis of mental health service contacts in the Isaac LGA indicate increased frequency in the use of mental health services. The increasing numbers of consumers could be attributed to an increasing prevalence of mental illness or mental health conditions in the resident population, or the influence of external factors (for instance financial and housing stress) but could also be the result of better access and promotion, leading to an increased uptake of services.
Advantage and disadvantage	The 2011 <i>Socio-Economic Indexes for Areas Index of Relative Socio-Economic Advantage and Disadvantage</i> (SEIFA IRSAD) scores indicate that Dysart, Moranbah and Middlesbrough (and by consequence Isaac LGA) had higher scores (less potential for disadvantage) than the Queensland average. However, results for 2016 show all areas have experienced a decrease in IRSAD scores, with Dysart experiencing the most substantial decrease. The decreased scores likely reflect the decrease in incomes, the outflow of people of working age with professional or trade qualifications, and the inflow of people attracted by affordable housing during the past few years. Moranbah was the only town to retain a score above the Queensland average, which is likely to be a reflection of strong ongoing employment in the mining industry, higher incomes, some subsidised rental housing and large percentages of people with qualifications.
Crime and safety	Between 2011 and 2016, Isaac LGA's offence rates were substantially lower than regional and State averages. There has been an increase in domestic and family violence, influenced by the economic downturn, and drug and alcohol use.
<b>Social infrastructure and services</b>	



Social condition/value	Status
Early childhood services	SIA consultation indicated that available childcare places were limited in each town, with Middlemount experiencing particularly high demand. It also noted that more flexible childcare options are required for shift workforce.
Health services and facilities	<p>SIA consultation participants noted:</p> <ul style="list-style-type: none"> <li>patients who require treatment beyond basic services are sent to regional hospitals, the nearest being in Mackay</li> <li>cumulative impacts of mining industry growth are straining health and emergency services, particularly as non-resident personnel are inadequately considered in government planning</li> <li>increased demands on hospital, GP and mental health services as a result of both population increases and FIFO workforces' demands</li> <li>no hospitals in Isaac LGA operate birthing facilities, which is expensive and stressful for young families</li> <li>recruitment and retention of practitioners and skilled workforce was a common issue, noting a loss of nursing staff and community support workforce as mining families relocate.</li> </ul>
Recreation and cultural facilities	The potentially affected communities offer a wide range of sport and recreation and arts, culture and amenity facilities, with Moranbah having the highest level of provision, commensurate with its larger population. There is limited entertainment/recreation for young people in Dysart, resulting in unsafe behaviours.
Police, emergency services and justice	Each town has a police station, ambulance station, a fire station and a State Emergency Service (SES) unit, which service the towns, rural properties, roads and mines. The Magistrates Court House and a Queensland Government Agents Service servicing the LGA are located in Moranbah.
Housing	
Dwelling structure and occupancy trends	Collectively between Dysart, Moranbah and Middlemount, there were more than 2,025 unoccupied dwellings on Census night in 2016. There is a high percentage of rented, mine-owned housing. Whilst housing costs in the Isaac LGA normalised over the past five years, the high percentage of dwellings owned by companies constrains normalisation of ownership, and leaves communities vulnerable to industry trends and policy changes.
Housing availability and cost	<p>The Isaac region experienced significant fluctuations in housing affordability during the past five years. During 2011-2013, there were very high cumulative demands for housing, and housing prices in each of the potentially affected communities soared, with rental costs reaching record highs and outstripping rental costs for equivalent housing on the coast.</p> <p>In response to the housing crisis, BMA and the Urban Land Development Authority (ULDA) constructed housing in Moranbah. However, by mid-2013 a number of mining construction projects had been completed, and some operational workforces contracted (or ceased in the case of Norwich Park Mine, which was put into care and maintenance).</p> <p>The development of large accommodation villages near Dysart and Moranbah also contributed to a decrease in housing demand for non-residential workforce. As a result, housing pressures eased and the cost of housing plunged. Rental costs and asking prices are currently lower than for comparable housing in the adjacent LGAs.</p>

Social condition/value	Status
Workforce accommodation	The number of beds increased sharply during 2010-2013 to reach 21,745 beds as per QGSO. During the contraction in the mining industry, the number of beds fell (as accommodation villages were mothballed or decommissioned) and in June 2018, was estimated at 18,780 beds. Data provided by IRC indicate that at June 2018, there was a total of 18,752 existing accommodation village beds in the Isaac LGA, with a total approved capacity of 31,288 beds.

### 17.4.5 Economic and employment profile

This section describes a summary of the labour force and key industries of employment for the Isaac LGA and the broader MIW and Central Queensland regions. Additional information is provided in **Appendix L-1 Social Impact Assessment**.

Community objectives for employment which were identified in SIA interviews and workshops included:

- the need to increase apprenticeship opportunities and employment pathways of young people
- improving the limited employment opportunities for people with a disability
- provision of permanent employment and long term contracts to encourage the stability of the workforce and the community
- increasing and retaining skilled workforce in local towns, with underground mining seen as specialised and desirable employment
- the potential for increased local employees to increase the human resource pool for community infrastructure providers and businesses
- minimising draw of labour from local businesses to mining operations.

#### Isaac LGA labour force

As a result of mining industry contraction and population loss between 2011 and 2016, the number of Isaac LGA usual residents who were employed decreased and led to decreases in employment in mining and construction.

Census 2016 data identified labour force participation features including:

- of the 15,641 Isaac residents aged 15 or over, 67 per cent were in the labour force (either working or looking for work) compared to 61 per cent for Queensland
- the workforce included 337 Indigenous people, of whom 28 (8.3 per cent) were unemployed
- women represented 40.6 per cent of the workforce, but only 39.9 per cent of employed people, so female unemployment was higher at 2.7 per cent than for men (2.2 per cent).

The largest occupational groups were machinery operators and drivers, followed by technicians and trades workforce. This reflects the LGA's strengths in mining and associated business sectors (e.g. engineering and mechanical maintenance). Mining accounted for 6,024 people working in the LGA in 2016 (42 per cent of employed persons) compared to 2.3 per cent for Queensland.

Since 2016, mining employment availability has increased along with increasing coal prices. Mines located in the Isaac LGA and/or serviced by Isaac LGA towns provided approximately 22,291 jobs at 31 March 2018, which was an increase of 1,410 (or 6.8 per cent growth) jobs over the previous six months. Open cut mines employed 17,043 people (6.2 per cent growth) and underground mines employed 4,888 people (12.8 per cent growth).

## Regional labour force

QGSO's analysis of labour force trends for the Mackay SA4 (MIW region) in the year to June 2018 indicated that:

- the labour force increased by 3,900 people over the year, with the number of employed people rising by 5,700 people, and the number of unemployed people decreasing by 1,800
- unemployment decreased by two percentage points, declining to 3.4 per cent, lower than the Queensland average of 6.0 per cent
- labour force participation increased by 3.30 percentage points, and was 9.7 percentage points higher than the State average.

This indicates a strengthening of the labour market in the past year, due in part to an increase in mining employment opportunities. The data also indicate a decrease in the Mackay SA4's population but a small increase in labour force participation. Mining was the highest industry of employment in the Mackay SA4 in 2016 employing 14.4 per cent of the employed workforce.

In the Central Queensland SA4 in the year to June 2018:

- the labour force decreased by 2,600 people, with the number of employed people decreasing by 2,100 people and the number of unemployed people decreasing by 400 people
- fluctuations in unemployment were less dramatic than in the Mackay SA4, changing by less than 0.2 per cent over the year
- labour force participation increased by 1.2 per cent.

Whilst unemployment was higher in the Central Queensland region at 6.0% in June 2018, the data indicate a less volatile labour market than in the Mackay SA4.

Whilst the mining industry employed 8.7 per cent of workforce in the Central Queensland SA4, it was only the third highest employing industry behind health care and social assistance at 10.5 per cent and education and training at 9.0 per cent.

Analysis of construction sector employment numbers for 2011 and 2016 identified the following changes:

- in the Mackay SA4, the number of people employed in the construction industry decreased by 2,368 people (approximately 33 per cent of the sector's employment) with decreases spread fairly evenly between the building construction, heavy and civil engineering and construction services industry, indicating a decline in construction employment opportunities across the board
- in the Central Queensland SA4, the declines were much lower at a total of 899 employed people (or approximately 11 per cent), with the largest decline in building construction.

The decrease in the Mackay SA4 largely reflects the completion of construction on a number of mining projects in the Isaac LGA, and consequential losses in indirect employment affecting the building construction industry.

Analysis of mining sector employment numbers in the two regions between 2011 and 2016 identified the following changes:

- in the Mackay SA4, the number of people employed in the mining industry increased by 1,177 people (or approximately 13.3 per cent) with coal mining responsible for most of the increase
- in the Central Queensland SA4, mining employment grew by a more modest 2.9 per cent, with oil and gas extraction responsible for adding the majority of new jobs.

## Indigenous employment

Census 2016 data identified there were an estimated 3,310 Indigenous people in the labour force in the Mackay SA4, and an estimated 4,487 Indigenous people in the Central Queensland SA4's labour force. Collectively, unemployed Indigenous people across the two regions represent a strong potential labour pool for both the construction and operation of the Project.

## Unemployment trends

Unemployment rates in the Isaac LGA were consistently lower than in the other LGAs, tracking closely to the unemployment rates in the Broadsound-Nebo SA22 and the Moranbah SA2, and declining to 1.5 per cent in December 2018, compared to the Mackay LGA's 3.9 per cent and the Whitsunday LGA's 3.6 per cent. As the Isaac LGA's unemployment rate was already low (with less room for movement and fewer people to draw on), more significant positive changes have been seen in the remainder of the Mackay SA4. The unemployment rate has decreased from a high of 8.4% in the Mackay LGA and 9.9% in the Whitsunday LGA in December 2015 to 3.9% and 3.6% respectively in December 2018. This is an indicator of the solid employment growth in the Bowen Basin mining sector which draws strongly from the MIW Region.

## Skill shortages

The DSDMIP Mackay Isaac Whitsunday Regional Office advised that it has been aware of skill shortages in the region since late 2016. During 2017, DSDMIP initiated consultation with businesses in the Mining Equipment, Technology and Services (METS) and construction sectors, labour hire companies and peak bodies, to investigate the types of skills in demand and the impacts skills shortages were having on businesses' ability to complete contracts.

Approximately 60 per cent of businesses who provided survey responses at a supply chain opportunities forum in June 2017 identified finding quality staff and skilled labour shortage as an issue. DSDMIP consultation with local METS and construction businesses identified extreme difficulty in recruiting machinery operators, and a shortage of experienced, qualified personnel including boilermakers, carpenters, concreters, electricians, diesel fitters, riggers, fabricators, machinists, diesel mechanics, trades assistants, and blaster painters.

## Construction skills shortages

The most recent Construction Outlook survey (Australian Industry Group 2017) found that:

- employment in major construction had increased by 4.3 per cent in the year to February 2018
- labour shortages are increasing, with 66.7 per cent of respondents (Australian construction businesses), reporting either 'major' or 'moderate' difficulty in recruiting skilled labour. This was a large increase from the March 2017 survey period when 39.1 per cent of respondents reporting either major or moderate difficulty in recruiting skilled labour
- skilled labour sourcing difficulties are expected to worsen over the six months to September 2018.

## Operation skills shortages

The Australian Department of Employment produces list of occupations for which shortages or some recruitment difficulty is evident. This information is Queensland-wide rather than region-specific, but provides valuable insights into the likely ease of accessing particular skills. The latest list produced for Queensland was for the year 2016-17. Occupational reports for skill categories relevant to the mining and construction sectors are shown in Table 17.5. A 'shortage' is defined when employees are unable to fill or have considerable difficulty filling vacancies, whilst 'recruitment difficulty' means some employers have difficulty filling vacancies.

Key areas of shortage relevant to operations include metal fitters, machinists and sheet metal trades personnel, and plumbing and gas fitting trades which were classified as 'recruitment difficulty.'

Skills shortages research conducted by the Australian Industry Group in 2016, based on employers' inputs, indicated that the top three occupations where they expected to experience the most skills shortages in 2017 included technicians and trades personnel as the largest area of concern followed by machinery operators and drivers. Both groups are relevant to the Project's operational requirements.

**Table 17.5 Mining industry skill shortages, Queensland, December 2016**

Occupational group	Labour market rating
Structural steel and welding trades	No shortage
Sheet metal trades	Regional shortage
Painting trade	Shortage
Plumbing and gas fitting trades	Recruitment difficulty
Electricians (general)	No shortage
Metal fitters and machinists	Regional shortage
Mechanical engineers	No shortage

## Business and supply chain

The Isaac LGA's economic strengths (REMPAN 2018) include:

- significant thermal and metallurgical coal deposits, collectively producing more than 54 per cent of Queensland's total saleable coal in 2015
- a long-standing agricultural industry, valued at \$192 million in 2015
- high levels of trade qualified residents, and significant human and physical capital in mining-related businesses
- areas of significance to the tourism industry.

Stakeholders consulted as part of the SIA indicated that:

- there is an opportunity for small business growth with vacant shops and offices available in each potentially affected community
- there has been growth in the number of unregistered businesses which operate through the internet, affecting the number of registered businesses
- all businesses are looking for an increase in population to sustain their profitability, however an increase in Dysart's local workforce and local spend was seen as critical, noting that Moranbah has a more diverse range of mining operations and businesses and is more resilient to industry cycles.

## 17.5 Potential impacts and mitigation measures

### 17.5.1 Stakeholder views on the Project

Community sentiment in the Isaac region is that new mining operations are supported, with the availability of local employment, business supply opportunities and potential population growth driving this support. Stakeholders confirmed that BMA and other mining companies need to maintain their social licence to operate by ensuring communities benefit from mining projects, and working collaboratively with communities to address emerging issues such as housing shortages or strains on social infrastructure. Key themes identified with respect to potential impacts and benefits are summarised in Table 17.6.

Table 17.6 Potential impacts and benefits identified by stakeholders

Impact area	Impacts and benefits
Communities and stakeholders	<ul style="list-style-type: none"> <li>potential to strengthen population growth and increase community resources which support wellbeing</li> </ul>
Housing and accommodation	<ul style="list-style-type: none"> <li>potential for in-migrating personnel's demands to exacerbate rental housing shortages</li> <li>potential to stimulate investment in housing, including Belyando Estate</li> <li>reduced benefits to communities of remote accommodation villages</li> </ul>
Health and wellbeing	<ul style="list-style-type: none"> <li>potential to strain council waste management facilities' capacity</li> <li>residential and non-residential workforces demand on water supply and roads</li> <li>exacerbation of current demands on council and health services from non-resident personnel</li> <li>increasing demands on hospital, GP and mental health services, as a result of both population increases and FIFO workforce' demand</li> <li>potential to increase demand on community facilities including childcare</li> <li>potential to increase demand on mental health care services</li> <li>fewer emergency resources are available in towns when they are required at mine sites</li> </ul>
Local business	<ul style="list-style-type: none"> <li>potential to stimulate business activity in Dysart, Moranbah and/or Middlemount through increased population</li> <li>benefits of BHP's Local Buying Program and potential Project opportunities</li> <li>potential to increase competition with mining operations for labour and skilled personnel</li> <li>potential for personnel's partners to contribute to the pool of skilled personnel for local services and businesses</li> </ul>
Workforce and employment	<ul style="list-style-type: none"> <li>increase in local apprenticeship and training opportunities</li> <li>employment opportunities which would retain young people in local communities</li> <li>availability of employment and training pathways for Indigenous people</li> </ul>
Cumulative impacts	<ul style="list-style-type: none"> <li>contribution to cumulative impacts of mining industry growth on health and emergency services</li> <li>potential for contribution to fluctuating demands from population cycles and multiple mining projects to affect service capacity</li> <li>potential for housing shortages</li> <li>potential for non-local residents' needs to affect service access</li> </ul>

## 17.5.2 Community values, land use and settlement

This section describes the potential for impacts on land uses, amenity, the settlement pattern, community identity and cohesion.

### Sensitive receptors

BMA is the owner of the two properties likely to be directly affected by the Project (Meadowbrook and Lake Vermont Homesteads). Relocation of the existing water pipeline and powerline into a new infrastructure and transport corridor is not expected to affect any private properties.

Two landholders were interviewed in 2018, and did not identify any negative impacts as a result of the Project proceeding. One of the landholders did note that the existing Saraji Mine contributed to occasional dust issues during adverse weather, and that the mining industry was a source of competition for labour for his business.



Potential air quality and noise emission impacts from the Project were assessed and will be managed in accordance with the recommendations outlined **Chapter 11 Air Quality and Greenhouse Gas** and **Chapter 12 Noise and Vibration** respectively.

**Chapter 9 Groundwater** provides the Project's groundwater assessment. The findings indicate that there would be no groundwater drawdowns which would affect the use of bore water by local property owners.

Overall, landholders were comfortable with the terms of their agreements with BMA, and confirmed the existence of positive relationships with BMA and its staff.

### Changes to land use or settlement pattern

The Project, located 25 km from the nearest community of Dysart, is unlikely to have a negative effect on the settlement pattern by constraining residential expansion or inhibiting local development. There is potential for support for population growth and therefore the development of new housing within the established urban footprint.

As an underground mine, the Project has a smaller surface footprint than an open cut mine, and the potential for land disturbance is reduced.

Subsidence may result in general impacts including surface depressions or cracking impacts on surface water resources, erosion and sedimentation until a stable profile is restored, and the potential for groundwater drawdown and consequent ecological impacts.

Ongoing reporting will be conducted during the operation of the Project, in accordance with the Project's Environmental Authority (EA), Rehabilitation Management Plan (RMP) (**Appendix K-1**) and Subsidence Management Plan (**Appendix K-2**).

When operation of the Project concludes, approximately 20 years after its commencement, land which was disturbed by mining infrastructure or subsidence will be progressively rehabilitated in line with the RMP.

### Visual amenity and landscape impacts

As described in **Chapter 13 Scenic Amenity and Lighting**, the regional and local landscape surrounding the Project Site is considered to be generally representative of the Bowen Basin region with mining being the predominant activity. Assessment of the Project's potential for impacts on visual amenity indicated that:

- the Project Site lies in an area dominated by rural land uses interspersed with large mines
- there are no protected landscapes close to the Project Site or other areas that are likely to be used for recreation
- the Project Site is not located close to any designated tourist drives that would be affected by any landscape changes.

As such, the Project is located in an area with few sensitive visual receptors and generally low landscape sensitivity.

Changes to the rural landscape are noted as result of subsidence, which will result in changes to landform, however, due to the location of the proposed underground mining area, opportunities for these changes to be experienced by sensitive receivers are limited. No significant impacts on landscape character, scenic amenity or lighting were identified.

## Community identity and functions

The development of the Project will reinforce the Isaac region's position as one of the foremost coal producing regions in Australia, and contribute to local communities' roles in servicing current and future mining employees and families. In Dysart in particular, the development of an underground coal mining project adjacent to the existing Saraji Mine, an employer of more than 40 years, is likely to strengthen confidence and optimism in the town's future, and be positive for locals' sense of identity.

The Project's development is likely to support the Dysart community's function as a home town for local mining personnel, by increasing the number of people living in the town and contributing to social resources. This effect may also be seen in Moranbah, but will be less noticeable in the context of Moranbah's larger population.

Consultation with Barada Barna people did not identify any specific impacts to cultural or social values. However, BMA will consult with BBAC again prior to Project construction to confirm their understanding of the Project's social impacts and benefits.

The Project will contribute to some diversification of the economy by introducing an additional underground mine to the Isaac LGA's mix of local mining operations, which are predominantly open cut. However, the Project's more significant contribution is supporting communities by increasing the long-term availability of mining employment in the Isaac LGA and the MIW.

## Community cohesion

The potential for an increase in local populations is likely to strengthen community resources which contribute to cohesion, with increased numbers of family members available to participate in and volunteer for local events and sporting group development.

During times when cumulative numbers of non-resident personnel were very high (e.g. 2008-2012) community members have felt a threat to the towns' functions in servicing mining industry families, with unplanned and unfunded demands on services, and changes to the local/non-local resident balance which affect the town's social character as close and self-contained communities. BMA will manage potential impacts on community identity and cohesion related to increased numbers of non-local personnel, for example, through its ongoing support for local schools, accommodation support for its employees, and support to businesses through the Local Buying Program.

## Indigenous engagement

BHP's Reconciliation Action Plan (RAP) commits to acknowledging and respecting the rights of Aboriginal and Torres Strait Islander peoples, and contributing to their economic empowerment and social and cultural well-being. The current RAP (2017-2020) applies to all new operations or major capital projects, as will the future RAP. The Project will be in line with the RAP current at the time of Project commencement and will include:

- seeking to reach agreements with Aboriginal and Torres Strait Islander peoples which deliver sustainable improvements in their economic, social and cultural wellbeing
- minimising impacts on aspects of significant heritage value
- developing and implementing an Aboriginal and Torres Strait Islander Economic Empowerment Plan as outlined in **Appendix L-1 Social Impact Assessment**
- delivering Aboriginal and Torres Strait Islander cultural awareness and competency training, in consultation with Barada Barna people, to Project employees
- maintaining grievance and complaints mechanisms which are culturally appropriate and accessible to Aboriginal and Torres Strait Islander people.



### 17.5.3 Employment

#### Construction workforce requirements

BMA would own and operate the Project, and contract the construction of the Project infrastructure to a contractor(s).

The timing of the Project is yet to be finalised. For EIS-related impact assessment purposes, construction has been assumed to commence in FY 2021 and finish in FY 2023.

It is estimated a construction workforce of 500 people will be required in FY 2021, increasing to 1,000 people during FY 2022 and FY 2023. These estimates were used to predict the Project's potential impacts on the Isaac LGA's employment opportunities and on the LGA's population, housing capacity and social infrastructure.

Construction personnel will work across two 12 hour shifts, with an operating schedule of 24 hours a day, seven days a week, 365 days per year. Rosters are typically confirmed in the late stages of project execution planning, but are likely to include a roster of 21 days on and seven days off, with two 12 hour shifts changing over at 6:00 am and 6:00 pm.

Skilled occupations required for construction include heavy equipment operators, long wall construction specialists, engineers, construction managers, supervisors and labourers, tradespeople including boilermakers, carpenters, scaffolders and electricians. Personnel including engineers, geologists, environmental scientists and management and administrative personnel will also be required. The Project represents a substantial employment benefit to people in these occupational groups, with contracts of up to three years available.

The Mackay and Central Queensland SA4s had a collective 2,183 people employed in heavy and civil engineering construction, so it is likely construction workforce in both regions will benefit from Project opportunities. Given regular demands for these specialist skills in the Bowen Basin, some of the construction personnel are likely to be drawn from the Isaac LGA and adjacent LGAs, however personnel with specialist mine construction skills are highly mobile, and the majority are likely to be drawn from other regions.

During the detailed design phase, BMA will refine construction workforce estimates to provide a greater level of detail on the workforce ramp-up. Updated data will inform discussion with IRC and other stakeholders with respect to addressing construction personnel's demands on local resources the LGA. Data on the workforce ramp-up will also inform BMA's briefings to business in the Isaac LGA and the MIW region to ensure they are aware of the range and timing for opportunities to supply the Project.

#### Operational workforce requirements

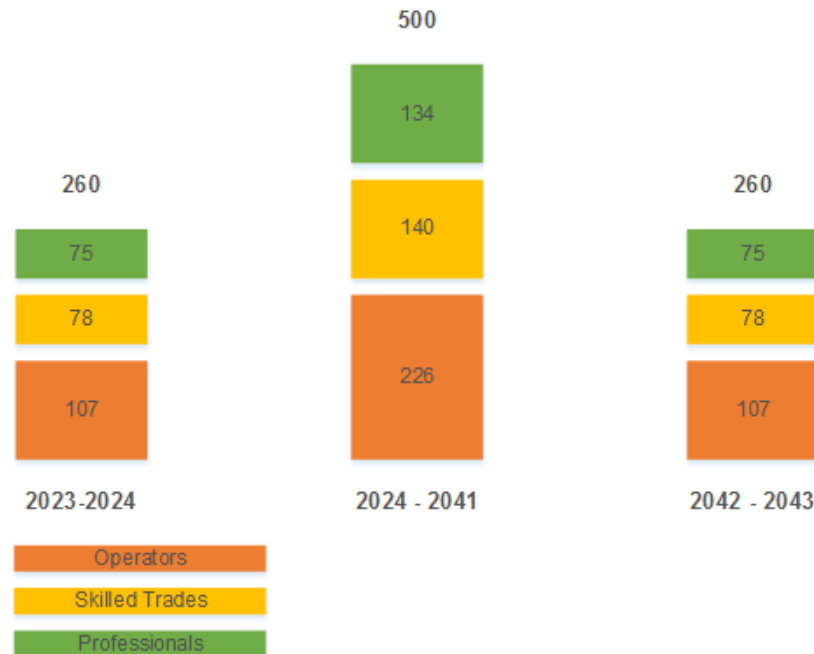
The Project's first coal is anticipated to be produced in FY 2023, and be at full development in FY 2025. The estimated ramp-up for the operational workforce is shown in Figure 17-3 and indicates that approximately 260 FTE personnel would initially be required during FY 2023-2024, up to 500 personnel would be required from FY 2025 to 2041. A ramp-down to 260 personnel is likely in FY 2042, prior to the decommissioning phase.

Occupational groups required for operations will include heavy equipment operators, drillers, skilled trades (i.e. electricians, boilermakers, mechanics and diesel fitters) and professionals (i.e. engineers, geologists, scientists, mine managers and administration staff).

BMA anticipates that approximately 70 per cent of operational personnel would be BMA employees and 30 per cent would be contractors.

The Project will also provide additional opportunities for local employment through support services such as transport and the supply of goods and services.

An operational roster pattern of eight days on, six days off, seven nights on and seven nights off is planned, offering a high ratio of rest days to work days and a roster pattern which is conducive to work/lifestyle balance. This will also allow Isaac LGA residents from outside Moranbah, Dysart and Middlemount to travel home at the end of their rosters, as long as combined on-site hours and travel time do not exceed 14 hours. This will be managed through BMA's fatigue management policy that is current at the time of operation.



**Figure 17-3 Operations workforce estimates**

Given BMA's locally targeted recruitment strategies for the Project, it is considered that up to 100 existing and 100 new in-migrating residents could be employed for project operations. Given the estimated total workforce of 500, this level of local employment would limit the commuting workforce (FIFO and DIDO) to 300.

The availability of long term, skilled employment would be a significant benefit to local and regional residents who are skilled and/or interested in employment in the mining industry. The Project's proposed operational jobs will increase the number of direct BMA jobs in the Isaac and Central Highlands LGAs by more than five per cent, and support ongoing employment and training opportunities for the region's residents. In particular, the choice of living locally or commuting will be attractive. As an underground mine, the Project will also offer skills diversification and development for existing mining personnel.

## Workforce management principles

BMA's workforce management principles for the Project are:

- facilitating the employment of Project employees who choose to live in the Isaac LGA (as required by the SIA Guideline (2017))
- Isaac LGA residents are encouraged to apply for Project employment and will be given full and fair consideration in recruitment processes
- a dual focus on recruiting existing local residents and attracting new residents to the key centres of Dysart and Moranbah
- provision of both long term employment and contract employment opportunities
- supporting personnel who intend to move to the Isaac LGA to do so, including through provision of subsidised housing

- enabling all personnel who live within a safe daily driving distance to choose their living arrangement (i.e. residential or commuting)
- all Australian citizens and permanent residents are eligible to apply for jobs
- BMA will not discriminate against job applicants on the basis of where they live
- the Project will support BHP's goal for 50 per cent female employment by 2025
- the Project will work towards a target of 5.75 per cent Indigenous personnel by 2025
- BMA will continue its commitment to workforce training and skills development for all personnel employed by the Project.

### Opportunities for workforce to commute

BMA anticipates that some personnel from other regions would choose to move to the Isaac region for Project employment, and some would choose to live in workforce accommodation villages while on roster. Population and housing considerations are outlined in Section 17.5.4. Personnel who live within a one hour drive of the Project will be able to commute to work daily. People driving to work will access the Project Site via Dysart-Moranbah Road which runs along the western edge of the proposed MIA. Access to the MIA and the CHPP will require one new intersection with Dysart-Moranbah Road, which will require approval from the Department of Transport and Main Roads (DTMR), Queensland Rail and IRC.

People who live more than one hour's drive from the Project will be required to stay in a workforce accommodation village during their rostered-on shifts. Those who can travel home by road within fatigue management requirements will have access to DIDO arrangements, and personnel whose homes are further away will be provided with FIFO arrangements.

The BMA-operated Moranbah Airport will be used for the transportation of non-local Project personnel. The projected increase in personnel can be accommodated within the existing capacity of the Moranbah Airport.

### Workforce diversity

BMA's diversity practices are based on the belief that developing workforce capability and diversity and building an inclusive work environment are fundamental to the company's success. BHP's target is to achieve Aboriginal and Torres Strait Islander employment of 5.75 per cent of its total managed workforce including direct, contracting and labour hire employees by 2020-21. The Project is likely to set a goal of 5.75 per cent for its first year of operations. An Aboriginal and Torres Strait Islander Economic Empowerment Plan will be developed for the Project, as detailed in **Appendix L-1 Social Impact Assessment**.

BHP has also set a goal of gender balance (50 per cent female employment in its workforce) by 2025. A strong goal in support of this target will be set for the Project. This will assist the Project to attract and retain a more diverse workforce than is typically seen for mining operations, and increase the availability of employment for women and Indigenous people in particular.

As part of its commitment to workplace diversity and inclusion, BMA will also collaborate with Hinterland Community Care in Dysart and Moranbah and District Support Services (MDSS) to identify and support programs and partnerships which develop employment pathways for local people with disability.

### Training and development opportunities

BMA undertakes a number of strategies to strengthen the skills base and availability of labour for project construction and operations, including 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. BMA also facilitates training and trade qualifications for local young people through its support for the Coalfields Technical Centre of Excellence (CTEC) in Moranbah. In 2018 and 2019, BMA provided 40 new apprenticeships each year

at Bowen Basin mines, noting apprenticeships as a key part of the company's commitment to local communities.

The Principal contractor will coordinate across construction contractors to manage the demand for tradespeople over the course of the construction phase. To facilitate opportunities for training and employment of local people, the Principal contractor may require liaison with Construction Skills Queensland and the Department of Education and Training.

For operations, BMA will co-ordinate direct employment of apprentices and trainees. Training and development strategies for the Project's workforce will include a focus on new entrants to mining and re-training of existing mining personnel for underground mining. BMA's commitment to in-service training and 'back to work' opportunities for injured workforce will also support workforce development.

BMA will assess skills availability for the construction and operational phases (prior to each phase) to enable specific training and recruitment strategies to be established in time to resource the Project.

A range of local and regional training organisations are available to support increased training and capacity development initiatives. Further information is provided in **Appendix L-1 Social Impact Assessment**.

### **Likely availability of personnel with relevant skills**

The Department of Industry, Innovation and Science forecasts indicate that Australian exports of metallurgical coal for steel making are expected to increase between 2018 and 2023, with an average compound annual growth rate of 3.5 per cent per annum, however the value of Australian metallurgical coal exports is expected to decrease by an average of 1.2 per cent per annum between 2016-17 and 2022-23 (Department of Industry, Innovation and Science 2018). On this basis, modest ongoing growth in mining industry employment might be anticipated, with potential to exacerbate current labour and skills shortages.

If the current employment trends are sustained, the Project is likely to have difficulties recruiting skilled personnel.

BMA will aim to recruit operational personnel from across Queensland, including the Isaac LGA and Mackay SA4. Based on historically low unemployment levels in the Isaac LGA, current skills and labour shortages in Queensland, and the need for some personnel who are experienced in underground operations, the Project is likely to draw the majority of its operational workforce from outside the Isaac LGA. Some of these would commute back to their homes between rostered on periods, and some would settle locally.

### **Workforce health and wellbeing**

BMA is committed to providing workplaces which support physical and mental health.

As part of the tendering process, contractors for construction will be required to demonstrate an excellent health and safety record, describe in detail how they will manage work practices (including offsite driving) to minimise risks to personnel, and detail how they will promote a healthy workplace.

*Minerals Council of Australia's Blueprint for Mental Health and Wellbeing* (MCA 2015) notes that employers and industry can play a role in addressing mental health and describes a mentally healthy workplace as one which 'strives to support the mental health of employees at all levels... creates a positive working environment that builds individual skills and resilience, reduces workplace risks to mental health, and supports staff with mental health conditions'.

The Project will align with the *BHP Safety Our Requirements* (BHP, 2018b). BMA also contracts an Employee Assistance Program provider to provide proactive support for mental health and family issues. Detailed measures to support workforce health and minimise impacts on local services are provided in **Appendix L-1 Social Impact Assessment**.

### **Fatigue management**

Fatigue management is a core policy for BMA projects and operations. BMA's construction contractor will employ fatigue and journey management policies which are consistent with BMA's requirements. This will include rest days for the personnel to maintain sleep levels, and attend to health and fitness.

Fatigue and journey management procedures for operations will include:

- a training approach which educates managers, supervisors and personnel in fatigue management
- standard rosters which can only be varied through risk assessment and authorised sign-off
- monitoring employees and contractors shifts to ensure fatigue management guidelines are met
- providing guidelines which outline acceptable safe journey management practices
- bus transport to and from the accommodation villages and work sites, as well as to and from Moranbah Airport.

Further detail is provided in **Appendix L-1 Social Impact Assessment**.

### **Decommissioning workforce**

The workforce would decrease from up to 500 people to approximately 260 employees and contractors in the two years prior to Project closure, with subsequent job losses for Project employees and contractors. After FY 2042, if no extensions are sought and approved, the Project's workforce would decrease to a staff of approximately 20 personnel to manage decommissioning and rehabilitation. The loss of jobs may be experienced as a disruption to family plans and careers, however the planned transition to a smaller workforce and clear, early advice plans to employees, local communities and IRC will mitigate impacts on family and community wellbeing.

## **17.5.4 Population, housing and accommodation**

### **Construction population impacts**

Some of the construction personnel are likely to be drawn from the Isaac LGA and adjacent LGAs, however the majority are likely to be drawn from other regions. Assuming ten per cent of construction employees may be drawn from within the Isaac LGA, the construction workforce would include 450 non-local personnel during FY 2021 and up to 900 non-local personnel in FY 2022-2203.

Of these, approximately 80 per cent may be on shift at any one time, so the FTE population increases attributable to the Project is likely to be in the order of 720 people during FY 2022-23. This would be an overall population increase of 2.21 per cent on the estimated FTE population. This is a modest increase, but will contribute to demands for local services as discussed in Section 17.5.6.

### **Operations population impacts**

BMA anticipates that approximately 260 personnel would be required from 2023-2024, and a peak of 500 personnel between 2025 and 2041. Project employment is therefore likely to attract local residents, both skilled workers and those who are new to the industry. On this basis, the SIA has assumed that approximately 100 personnel could be existing Isaac LGA residents, including those who are new to the industry or attracted from other local mining operations.

BMA's key incentives to attract personnel to the Isaac LGA include:

- the opportunity for well-paid, long term, skilled, locally-based employment
- promotion of opportunities to live in the well-serviced and well-located communities of Dysart and Moranbah
- offering subsidised housing to Project personnel who choose to move to Dysart or Moranbah
- investing in community development to enhance the amenity and quality of community services and facilities in local towns so that local towns are attractive to new personnel and families.

Estimates of population change and housing demand resulting from the Project as shown in Table 17.8 and discussed below are based on the following assumptions:

- up to 100 existing Isaac residents could be attracted to Project employment by Year 3 of operations
- 60 per cent of existing Isaac residents employed by the Project would maintain their existing housing arrangements (as owner occupiers, tenants or family members of people with existing housing entitlements) and 40 per cent (primarily those already employed in mining) would require new housing arrangements
- up to 100 operational personnel would originate from other regions and settle locally in Moranbah or Dysart
- the average new household size would be equivalent to the Isaac LGA 2016 average of 2.7 people per household
- at least 20 per cent of new residents would share units or houses at an average rate of 2 people per dwelling, with the balance being family households
- Year 3 of operations (estimated as 2025) is expected to see the full Project-related population increase realised
- operational personnel from outside a one hour daily driving distance would be accommodated in existing accommodation villages in the LGA
- approximately 50% of commuting personnel would be on shift at any one time.

As shown in Table 17.8, attracting 100 personnel and their families to the region would result in a population increase of approximately 270 people by 2025, equivalent to a 1.27 per cent increase in the estimated residential population. As the majority of the BMA housing on offer is in Dysart, this is likely to lead to a significant increase in the Dysart population, in the order of 200 or more people.

Based on historically low unemployment levels in the Isaac LGA, and assuming current skills and labour shortages continue, the Project is also likely to draw a large proportion of its operational workforce from outside the Isaac LGA. Project personnel will be given the option of locally based employment or commuting arrangements. Commuting arrangements would be predominantly FIFO but may include DIDO arrangements.

On the assumption that 100 existing residents and 100 new local personnel could be recruited, up to 300 non resident workers would be employed. This would result in an increase of 150 non resident workers on shift by 2025, which would represent an increase of 1.33 per cent on the projected non resident worker population.

IRC has noted that it considers full time residents and part time residents (commuting personnel) as important in planning for services and infrastructure, to ensure that all personnel have access to an appropriate level of services while they are living or staying in the LGA. Together, estimated numbers of new residents and non-resident personnel on shift at 2025 would represent an increase of approximately 1.29 per cent on the estimated FTE population in 2025.



Table 17.7 Estimated population and housing demand change

Population	2021	2022	2023	2024	2025	2026
Isaac Population (est.)	20,762	20,887	21,012	21,138	21,265	21,556
Isaac LGA Non-resident personnel (Series B)	11,580	11,760	11,170	11,130	11,292	11,292
Isaac LGA Estimated FTE (estimated resident personnel + non resident personnel)	32,342	32,647	32,182	32,268	32,557	32,848
Estimated construction personnel	500	1,000	1,000			
Estimated operations personnel			260	26s0	500	500
<b>Construction</b>						
Isaac LGA residents @ 10%	50	100	100			
Non-resident personnel	450	900	900			
Non- resident personnel at 75% on shift	337.5	675	675			
Non-resident personnel increase on estimated Isaac LGA FTE	1.04%	2.07%	2.10%			
Increase on non-res population	2.91%	5.74%	6.04%			
<b>Operations</b>						
Existing residents			50	50	100	100
New residential (local) personnel			50	50	100	100
Estimated commuting total			156	156	300	300
Population increase at average 2.7 per household			135	135	270	270
Increase in estimated resident population (%)			0.64%	0.64%	1.27%	1.25%
Non resident personnel (with 50% on shift)			78	78	150	150
Increase on estimated FTE (non resident personnel and new local residents)			0.66%	0.66%	1.29%	1.28%
<b>Housing requirement</b>						
Family dwellings for Existing residents requiring housing est. at 40%			20	20	40	40
Family dwellings for new residents at 80%			40	40	80	80
Shared dwellings at 2 people/dwelling			5	5	10	10
Total dwellings			65	65	130	130

## Construction accommodation village

All non-local construction personnel would be accommodated in workforce accommodation villages, and the Project would discourage non-resident construction personnel from renting local housing, to avoid the potential to limit permanent residents' housing choices.

Existing workforce accommodation villages utilised by BMA in the Moranbah and Dysart area are shown in Table 17.9.

**Table 17.8 Workforce accommodation villages owned or used by BMA**

Accommodation village	Ownership	BMA count - total rooms	Utilised rooms	Available rooms
Moranbah Single Person's Village (SPV)	BMA	594	590	4
Dysart SPV	BMA	430	425	5
Eureka	BMA	1,486	1,169	317
Buffel Park	BMA	1,439	1,286	153
<b>Total BMA</b>		<b>3,949</b>	<b>3,469</b>	<b>480</b>
Leichhardt Village	Third party	500	370	Variable
Dysart Ausco	Third party	400	283	Variable
Dysart Civeo	Third party	280	760	Variable
<b>Total Third Party</b>		<b>1,180</b>	<b>1,413</b>	<b>Variable</b>

This data indicates that the four accommodation villages owned by BMA had a total capacity of 3,949 rooms. Of these, approximately 480 rooms (12.2 per cent of total capacity) were available in March 2019. Current approvals for increased capacity of BMA facilities include an additional 261 beds at the Dysart SPV, 3,000 beds for the approved but not developed Red Hill Mining Lease (RHML) Project, and 503 beds for the Buffel Park Village.

The Project's timing is uncertain, as is the availability of accommodation when the Project's construction commences. However, given recent employment growth in response to increasing coal prices and the likelihood that some of the projects with an approved EIS or working towards an EIS would proceed, cumulative pressures on existing accommodation village stocks are likely.

The Project therefore includes a proposed accommodation village to support the Project's construction. The village is proposed to have a capacity of up to 1,000 beds and be located along the eastern boundary of MLA 70383. All non-local construction personnel would be accommodated in the construction accommodation village. Following the completion of construction, the construction accommodation village will be dismantled and removed from site.

The construction accommodation village will help ensure that construction personnel can be located in quality accommodation close to the Project Site, limiting travel time and demands on local roads, and providing access to health, recreation and support services within the accommodation village, which will reduce demands on local services. This will also minimise the Project's demands on housing, and mitigate inflation of rental costs.

## Operations housing and accommodation

Table 17.8 indicates that up to 130 dwellings could be required to house Project personnel by 2025, including existing residents who would lose their housing entitlements as the result on leaving their current jobs, and personnel who would move to the Isaac LGA.



All BMA employees are eligible for company-provided accommodation options which include units, houses and workforce accommodation village accommodation. Allocation of accommodation options is determined taking into account an employee's needs, the number of dependent children and other relevant family circumstances. BMA provides significant subsidies for housing costs, and also provides an ongoing housing maintenance and upgrades program.

At March 2019, BHP owned a total of 528 dwellings in Dysart, of which 29 were vacant and ready for allocation, and 161 were under care and maintenance until required, sold or redeveloped, and 871 dwellings in Moranbah, of which 37 were vacant and ready for allocation.

Analysis of local and other labour availability will be undertaken prior to operations, along with analysis of local housing availability and proposed residential developments. BMA considers that it has a sufficient number of dwellings in Dysart and Moranbah to accommodate Project personnel who may choose to move to the LGA. The Isaac region experienced significant fluctuations in housing affordability and availability during the past five years. With recent increases in mining employment and the recent improvements in housing affordability, local towns are currently experiencing strong demand for rental dwellings.

BMA invests in the refurbishment of properties (as necessary) to return them to its employee rental pool, to ensure that housing will be available for all personnel who wish to relocate to Dysart. This would substantially mitigate demands from BMA personnel on local housing stocks and minimise any rental price increases that would otherwise be induced. Some personnel may also choose to move to Moranbah and would be provided with housing there, subject to availability. Employees choosing to relocate from outside the region to live in Moranbah or Dysart may be also entitled to relocation assistance.

If this housing supply is inadequate due to any unforeseen factors, BMA has the ability to develop new housing on its vacant and build-ready lots (which include a total of 141 vacant residential lots in Moranbah and residential 17 lots in Dysart). On this basis, BMA expects to be able to accommodate all locally-based personnel using its existing housing stocks.

The Project had proposed to seek approval for a new accommodation to support the Project's operational stage, dependent on labour market conditions and housing market conditions during the pre-project phase. The proposed operational accommodation village has been removed from the Project on the basis of feedback from key stakeholders including the IRC and OCG.

BMA will accommodate its non-local operational personnel in existing accommodation village, which collectively had sufficient spare capacity (and substantial approved capacity for expansion) in 2019. As the operational commencement date is not certain, but is at least four years in the future, identification of accommodation villages which will accommodate personnel is premature, but are expected to include the Dysart SPV, Buffel Park and Dysart Ausco which is located on a site owned by BHP Coal. BMA would monitor demand for accommodation village beds as part of its recruitment process, and plan to ensure that all non resident personnel have access to accommodation village beds when required.

Again, as all non-local personnel will be accommodated in local workforce accommodation villages, impacts on short term accommodation are not expected.

On the expectation that BMA will provide housing in Dysart and potentially Moranbah for all personnel who wish to move to the Isaac LGA, impacts on housing affordability as the result of personnel settling locally are not expected.

### 17.5.5 Health and community wellbeing

This section discusses potential impacts and benefits for social resources which support community health and wellbeing. Stakeholder inputs of relevance to impacts on health and community wellbeing include:

- a construction workforce of up to 1,000 people would create a substantial demand on health and emergency services
- there are fewer emergency resources available in towns when they are required at mine sites
- an operational workforce of up to 500 personnel is expected to see substantial demands on health and emergency services, whether new locals and family members or non-resident workforce
- childcare services are currently limited
- insight regarding workforce build up is desirable two to three years in advance to enable a response in time to increase health, school and community services
- concern for increased cumulative impacts on the safety of the local roads.

#### BHP community development approach

BHP's approach to working with its communities is guided by a commitment to creating enduring social, environmental and economic value. BHP's Community Development Management Plans (CDMPs) guide partnerships and shared value initiatives with its communities.

In 2018, BHP committed that by mid 2023, BHP's social investment will contribute to improved quality of life in its host communities and support achievement of the United Nations Sustainable Development Goals. This includes investing not less than one per cent of pre-tax profits (three-year average) in meeting these objectives. The current CDMP (BHP 2018) includes a clear focus on local employment, local procurement and social investment. Social investment priorities in the Bowen Basin include:

- health and wellbeing, with a focus on mental health
- education and training, with a focus on literacy and numeracy, secondary education, vet and tertiary pathways
- enhancing livelihoods through socio-economic development
- biodiversity and water, with a focus on conservation.

BHP monitors social baseline data regularly, and consults with local communities to ensure its community development programs remain targeted to the greatest needs and opportunities. The CDMP current at the time of Project commencement will include consideration of the Project's potential social impacts and benefits.

#### Impacts on infrastructure, services and facilities

Project-related population increases are likely to result in incremental increases in demand for infrastructure supporting telecommunications, water supply, sewage treatment facilities, road traffic, air travel and waste management in the Isaac LGA. BMA's agreements with IRC address the impacts of its operations on local infrastructure, including:

- contributions to road maintenance
- contributions to the LGA's water supply, as per BMA's agreements with IRC
- support for the ongoing operations of the BMA-owned Moranbah Airport.

Most local infrastructure have serviced populations higher than that which could result from the in-migration of Project personnel, so population increases due to the Project are not expected to require increased infrastructure capacity requirements.

IRC noted in consultation that its waste management facilities in Moranbah and Dysart have a limited life and expansion of these facilities is one of council's key priorities. **Chapter 15 Waste Management** describes waste generation and management in detail, including waste minimisation and management to mitigate adverse impacts on environmental values. BMA will prepare and implement a Waste Management Plan for the construction and operational phases to address the relevant aspects of the legislation, adopting strategies consistent with the intent of the waste management hierarchy.

The Project includes a number of proposed infrastructure to be installed, and the use of existing infrastructure to facilitate the Project, including:

- water supply for the Project will be supplied via the existing water network supplying Saraji Mine
- for raw water requirements, BMA holds allocations of water from the Fitzroy and Burdekin water catchments and numerous licences to interfere with and take water across BMA's mine sites
- a sewage treatment plant will be installed to service the MIA and the construction accommodation village
- construction of a new 66 kilovolt (kV) powerline to Dysart Power Station
- relocation of the existing 132 kV powerline into a transport and infrastructure corridor
- relocation of the existing Eungella Water Pipeline Company (EWPC) Southern Extension Water Pipeline into a transport and infrastructure corridor.

On this basis, negative impacts on local infrastructure are not anticipated, with the exception of increased demands on social infrastructure as discussed below.

## Health, police and emergency services

### *Construction*

BMA will require its construction contractor and accommodation village provider to demonstrate how they will provide a safe workplace and accommodation arrangements respectively, and to detail the strategies in place to support personnel's health and wellbeing. Health facilities and service provision for all persons accommodated by BMA in relation to the Project's construction will include:

- access to a paramedic and emergency services staff, trauma kits, defibrillators and drug and alcohol testing facilities
- gyms, outdoor recreation space, sporting field and sports equipment, social meeting places and barbecue facilities
- an Employee Assistance Program for counselling and emotional health issues
- regular health promotion programs such as physical activity programs, reduced smoking and alcohol consumption
- health monitoring programs such as skin checks and blood pressure testing
- nutrition and education programs delivered through the accommodation village's dining facilities.

BMA aims to reduce impacts on local health services, however some construction personnel will potentially require general practitioner (GP) and hospital services while they are on shift. The closest GP clinic to the proposed construction accommodation village is in Dysart, and would likely experience most of the demand from non-local personnel. However, there is currently a GP shortage in Dysart.

At an estimated 900 non-local workforce at peak, this would be equivalent to a demand for approximately 0.08 of a GP. This would be an appreciable increase in demand for the one GP currently servicing Dysart and may cause increased waiting times for other patients. It is likely that an

additional doctor will be recruited before the Project commences, but the Project will need to monitor the level of GP provision and potentially facilitate an increase in the supply of local GPs.

The Moranbah and Dysart Hospitals have both noted in consultation that non-local workforce represent a significant cumulative impact on their services, as workforce resort to the hospital's emergency services departments for minor health issues. Local hospitals do not have full term doctors so the load is carried by nurses, with demands for treatment and associated administrative work considerable during 'peaks' when there are large numbers of non-local workforce in towns.

Non-resident personnel are also likely to make regular low-level demands on police (e.g. for vehicle licensing issues), as well as occasional demands on police, Queensland Ambulance Service (QAS) and Queensland Fire and Emergency Service (QFES) for responses to traffic accidents and emergencies including injuries and sudden acute illnesses.

BMA will liaise with the Queensland Police Service (QPS), QAS and QFES to advise of the timing of Project construction and the anticipated workforce ramp-up for construction.

For the construction period, BMA will ensure provision of social, health and recreational infrastructure within the proposed construction accommodation village to mitigate the workforce's demands on local services, however demands for local health services may still be experienced. Personnel will be advised not to use the Moranbah or Dysart Hospitals for minor health issues, however occasional demands on hospital services are likely.

### *Operations*

A resident population increase of 270 people, based on the Queensland Health's Rural Services' benchmark (communicated verbally), would see the need for an additional 0.5 GP (with demand likely shared between Moranbah, Dysart and Middlesboro doctors) by 2025. With 150 non-resident personnel on shift, and assuming 10 per cent of them would require a doctor's appointment during their rostered on periods, this would represent a small increase in demand for GP services, in the order of 15 people. Workers would be advised not to use the Moranbah or Dysart Hospitals for minor health issues, however occasional demands on hospital services are likely.

A large proportion of new households are likely to be young families who typically have more frequent needs for health services, so the demand increase may be higher than the population increase. GP clinics can expand with demand, and local clinics are of good quality with capacity for more service provision. However, recruitment and retention of doctors is a challenge to maintaining adequate capacity, and needs to be started well ahead of an anticipated increase in demand.

BMA will work with stakeholders including community organisations, Queensland Health and IRC to identify and implement strategies to attract and retain additional GPs.

Increased demand for specialist and allied services is also likely as the result of population influx related to the Project, and could impact on appointment times until demand thresholds are reached. All BMA operational sites employ health advisors, exercise physiologists and qualified rehabilitation and return-to-work coordinators. Free on-site physiotherapy and occupational therapy services for work and non-work related injuries will be provided, which is likely to minimise demand on allied health services.

Community service organisations have identified increasing demands for non-local workforce on mental health services based in Moranbah. This was in the context of increasing demand for mental health services from existing residents, with the cumulative impacts on non-residents workforce adding to the service load. BMA will monitor demands on local and community health services in co-operation with the Mackay Hospital and Health Service Rural Services. If a need for additional services is identified, BMA will work with local community partners in Moranbah, Dysart and Middlesboro to identify appropriate service and program responses to address mental health issues.

Increased demands on QPS, QAS and Rural Fire Brigades in response to accommodation village call outs, traffic incidents, and general community policing duties are also likely.

Given timing for Project delivery is uncertain, it is recommended that BMA engage with local medical providers, including Moranbah Hospital, local GPs, QPS and the QAS, to assess capacity for additional demand to be absorbed by local services. The 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.

BMA's CDMP includes a commitment to collaborate between industry and governments to achieve community outcomes, which could include joint advocacy with IRC for recognition of FTE population numbers in potentially impacted communities.

## Childcare

Moranbah, Dysart and Middelmount each have child care centres with a limited number of current vacancies.

With a residential population increase of 270 people, new residents may include approximately 26 children 0-4 years (based on the percentage of children of this age in the Isaac LGA in 2016 at 9.7 per cent), some of whom would require childcare. With respect to out of school hours' care, 270 new residents could see approximately 42 new children between 5 and 14 years, and if 7.8 per cent of them required care (as per the ABS survey results), up to four extra places would be required across the LGA. This is likely to be within the current capacity of local childcare centres and the family day care scheme. Prior to Project construction, if consultation with IRC and childcare providers indicates that Project demand exceeds capacity, BMA will liaise with local childcare providers, the Department of Communities Child Safety and Disability (DCCSD) and IRC to identify potential responses.

Key issues which constrain workforce participation, especially for women, is that there are no overnight child care options available in the LGA, and current day care hours are not adequate for those completing 12 hour shifts. BMA will consult with all employees as they are on-boarded to identify their current and anticipated childcare needs. If necessary, BMA will collaborate with IRC, other mining companies and the DCCSD to identify possible solutions such as overnight family day care arrangements.

## Education and training

The need for increased enrolments is likely to be felt primarily in Moranbah and Dysart. It is anticipated both towns will attract more of the new non-local personnel and families as they are close to the Project Site and have existing social infrastructure.

The maximum demand for school enrolments resulting from Project personnel settling in local communities would be in the order of 48 students, which should be well within the capacity of schools in Moranbah, Dysart, and Middelmount. However advanced notice of the number and age of children seeking enrolments to Education Queensland will assist schools to plan for adequate staff resources.

## Council and community services

Population growth as a result of the Project will increase demand for council and community services and facilities. In-migration of approximately 270 Project-related personnel and family members would be an increase of approximately 1.57 per cent on the forecast LGA population in 2025. There is also likely to be demand on some council services (e.g. recreational facilities and community services supported by Council) from non-resident workforce, but of a lesser order of magnitude.

Consultation with local service providers indicates that community and civic services such as counselling, financial counselling, disability services and family support services have limited capacity to an increased population. BMA's current CDMP includes a focus on mental health partnerships in the Bowen Basin, which is likely to see some increased capacity of support services before the Project is developed.

## Recreation and cultural facilities

Moranbah, Dysart and Middlemount have good access to recreational and cultural facilities. However, consultation participants report that resources to support the management and development of local clubs have dwindled as a result of 12 hour shifts, contract workforce (who don't participate in community activities at the same levels) and increased numbers of FIFO workforce.

In this context, facilities and services are adequate to absorb Project-induced population increases. As part of planning for the Project's contributions to community development and enhancement, BMA will work with local community organisations and the IRC to identify strategies which will increase human resources and skills available to support recreational and cultural facilities, including sporting clubs.

## Consultation and agreements with local and state agencies

BMA has regular meetings with IRC to discuss changes to its operations in the LGA, proposed projects, infrastructure management and a range of community issues. This consultation results in a range of agreements which address the impacts of BMA operations on council infrastructure, and support the wellbeing of local residents. BMA also consults with State agencies including Queensland Health and the Department of Education and Training through regular community forums and partnerships which address issues of community concern.

Prior to construction, BMA will consult with IRC to identify any issues of concern with respect to infrastructure capacity and/or housing demand, to support development of collaborative responses.

BMA will also ensure that IRC, Queensland Health, the Department of Education and Training, and the Queensland Police, Ambulance and Fire and Emergency Services are updated on Project planning, and are advised of the intended workforce ramp-up, commencing six months prior to Project construction, and ending 12 months after full development is reached.

BMA will also consult with Queensland Health, Police, Ambulance and Fire and Emergency Services in developing its Emergency Management Plan and service protocols for the Project.

## Potential for social and cultural disruption

The Isaac LGA's FTE population was estimated at 31,765 people at June 2017, of whom 21,108 people (66.5%) were residents and 10,580 (one third of the FTE) were non residential personnel.

During periods when high numbers of the non-resident workforce lived in the LGA, residents experienced strains on roads, public venues and health services. There are also records of safety concerns in relation to non-local workforce behaviour.

Whilst the crime statistics indicate that local towns are very safe communities, influxes of non-local people cause concerns about changes to community safety.

BMA's Workplace Conduct Policy requires all personnel to treat others in the workplace with courtesy, dignity and respect, both at and outside of work. Recruitment of the workforce 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. BMA will ensure both the workforce and local residents are aware of commitments to respect local values.

## Changes to livelihoods and potential for advantage/disadvantage

The Project is not expected to have any impacts which would increase the potential for social disadvantage in potentially affected communities. Access to BMA training pathways, the availability of skilled employment in underground mining and the incomes which come with mining employment are likely to increase the workforce's personal development and access to wellbeing resources. BMA's



ongoing support for community development initiatives and advancement of Indigenous people's economic and community goals are also likely to reduce the potential for disadvantage.

In the cumulative context there is potential for competition for tradespeople to increase the costs of trades to local residents. BMA has committed to trades training programs, including ten apprenticeships to be offered by the Project, to offset this impact.

### Workforce health

The health and safety of the workforce will be the Project's first objective during both construction and operation. The Project will fully comply with mine safety and health legislation, including the *Mining and Quarrying Safety and Health Act 1999* and *Coal Mining Safety and Health Act 1999* (CMSH Act).

BMA will comply with the Coal Mine Workers' Health Scheme requirements for employers, and will initiate a suite of strategies to enhance awareness of mental health issues and access to support services in the workplace.

### 17.5.6 Local business and industry procurement

The Project's primary supply chain considerations include:

- the location of construction labour and operation personnel
- access to equipment, consumables, professional services, maintenance providers and technical and trades sectors
- identifying Indigenous businesses who can be part of supply arrangements during construction and operation.

### Local and regional suppliers

The BMA Local Buying Program (C-Res) was created in 2012 to assist small to medium businesses in the Bowen Basin to competitively supply goods and services to BMA operations. The Local Buying Program provides opportunities for small businesses with less than 25 FTE employees to competitively supply goods and services to BHP, through registration, support and training. The Local Buying Program covers a diverse range of categories of goods and services, with key categories including:

- trade maintenance services
- engineering consulting
- equipment maintenance services and mobile equipment hire
- industrial plant construction services
- earthmoving services
- accommodation and catering.

During operations, a wide range of consumables, goods and services are required. BMA's Local Buy register indicates that services and goods which can be sourced from towns within the Isaac LGA, Central Highland LGA and Mackay LGA for the operation phase include:

- electrical, welding and plumbing services
- tyres and vehicle servicing
- earth moving, drilling and construction companies
- fabrication, engineering, hardware and glazing services
- mining services
- cleaning companies

- pharmaceuticals, groceries, stationary and newspapers
- mining equipment hire companies, including and crane and equipment hire
- accommodation facilities
- training, health service providers, labour hire, recruitment and human resource management providers
- cafes and clubs.

As at August 2018, there were 219 businesses from the Isaac LGA registered for BMA's Local Buying Program. The existing Saraji Mine's supplier base through the Local Buying Program includes 115 businesses from across Isaac (38 per cent), Central Highlands (13 per cent and Mackay LGAs (49 per cent). BMA's underground Broadmeadow Mine has a similar local supplier base of 143 businesses from across Isaac (33 per cent), Central Highlands (17 per cent) and Mackay LGA (50 per cent).

The Project will ensure local and regional suppliers have full and fair opportunities to contribute to the supply chain, and register for the Local Buying Program.

### **Opportunities to enhance the capacity of local business**

BMA's Local Buying Foundation is a key element of the Local Buying Program. Transactions incur a small processing fee which includes an allocation to the foundation, which focusses on:

- Building Sustainable Business Futures – with focus areas including workforce development projects, economic development projects, regional promotion and awareness
- Building Sustainable Business Communities, including industry training regional economic analysis and education and skills development for businesses.

These programs are likely to increase the capacity of local businesses to participate in the supply chain for the Project, as well as contribute to enabling business growth and diversification.

### **Indigenous businesses**

There are 15 Indigenous-owned businesses registered for BMA's Local Buying Program, primarily from across Mackay, Isaac and Central Highlands LGAs.

Subject to compliance requirements, BHP's Aboriginal and Torres Strait Islander procurement processes and outcomes are flexible and willing to remove the barriers to improving Aboriginal and Torres Strait Islander business outcomes.

The Project will proactively share information on procurement opportunities, supplier qualification and performance requirements with Aboriginal and Torres Strait Islander supplier networks and peer companies.

BMA is currently working on a series of measures which form part of a new comprehensive Local and Indigenous Sourcing Strategy, aimed at lifting the capability and performance in working with local and Indigenous suppliers.

### **Effects on local business and key industries**

The Isaac LGA and nearby LGAs have significant strengths in the construction and mining services industries which will enable them to respond to Project opportunities. There is however a risk that Project demands for personnel and contracted services will exacerbate current skills shortages and result in recruitment difficulties for other local businesses and industries. Local initiatives and partnerships which would assist local businesses and services to improve their capacity to recruit and retain staff would be considered under the Local Buying Foundation Program.

With BMA's Local Buying Program in place for the Project, local businesses (in the Isaac LGA) and those in the broader region are likely to derive increased trade and business opportunities as result of participating in the Project supply chain. It is also possible that expenditure by new local residents, and



to a lesser extent non-resident personnel, will increase demand for local goods and services, and support ongoing sustained development of local businesses.

BMA's Local Buying Foundation will assist in developing the capacity of local businesses to service not just the Project but other businesses and local residents.

### 17.5.7 Cumulative impacts

Cumulative social impacts are the incremental and combined impacts – positive, negative or both – of multiple projects. Cumulative impacts may occur at the local level and/or at the regional level.

Table 17.9 lists currently proposed projects in the Isaac LGA. Given uncertainties in the timing of some projects, including this Project, the assessment of cumulative impacts is speculative.

**Table 17.9 Proposed projects within Isaac LGA**

Project	Proponent	Location	Status	Peak workforce
Carmichael Coal Mine and Rail Project	Adani Mining Pty Ltd	Approximately 160 km north-west of Clermont	EIS approved with conditions May 2014 (SDPWO Act) Early works commenced October 2017	Construction - 2,475 Operation - 3,920
Eagle Downs	South 32 and Aquila Coal Pty Ltd	Approximately 20 km south-east of Moranbah	EIS approved with conditions 2010 (EP Act) Care and maintenance since 2015, final feasibility study underway 2018/2019	Construction – 360 Operation - 570
Byerwen Coal Project	QCoal Group	20 km west of Glenden	EIS approved with conditions July 2014 (SDPWO Act) Early works commenced 2017	Construction – 350 Operation - 545
Red Hill Mining Lease Project	BMA	20 km north of Moranbah	EIS approved with conditions June 2015 (SDPWO Act) EIS assumed development from 2020	Construction - 2,000 Operation - 1,500
Olive Downs Project	Pembroke Resources South Pty Ltd	Approximately 40 km south east of Moranbah and 40 km north of Dysart	EIS approved with conditions (SDPWO Act) Construction 2019-2021, operations from 2020	Construction – 700 Operation - Year 2/3 – 960; Years 14: 1,300
New Lenton Project	New Hope Group	Approximately 65 km north-west of Nebo, 65 km north of Moranbah, and 20 km south of Glenden	Draft EIS being prepared (EP Act) Construction 2019-2020, operations from 2021	Construction - 200 Operation - 300

Project	Proponent	Location	Status	Peak workforce
China Stone Coal Project	MacMines Austasia Pty Ltd	Approximately 170 km north-west of Clermont	Draft EIS submitted September 2015 (SDPWO Act) – CG preparing evaluation report Execution status unknown	Construction - 3,892 Operation - 3,391
Winchester South Project	Whitehaven Coal	30 km south of Moranbah	Draft ToR being prepared Construction from 2021, operation from 2022-23	Construction – 500 Operations - 450

The potential for cumulative social impacts during the Project's construction phase include:

- changes to perceptions of safety or access to services resulting from an increase in non-resident workforce
- safety issues associated with increased traffic volumes
- increased temporary demand on health and emergency services
- creation of additional direct and indirect local and regional employment
- contribution to regional skills shortages and labour market drain into the mining industry
- sustaining and enhancing opportunities for service industries and businesses in the LGA.

The potential for social impacts to occur during the Project's operational phase include:

- contributions to an increased population growth rate in Isaac LGA
- health and safety issues associated with increased traffic volumes
- increased workforce accommodation requirements affecting local housing affordability in Dysart, Moranbah, Middlemount and other LGA communities
- increased permanent demand on social infrastructure, including mental health, general health and emergency services
- continued provision of educational and training opportunities
- sustained opportunities for service industries and businesses in the LGA
- enhanced economic development opportunities across the Bowen Basin.

All cumulative impacts are likely to be significant, but their likelihood is unknown.

Prior to the Project's construction, BMA will reassess the potential for cumulative impacts and its local and regional implications, to inform further engagement with the DSDMIP, IRC and other proponents.

### 17.5.8 Impacts of Project closure

The Project is proposed to be operational for approximately 20 years with potential to extend the mine life. However, should the Project cease its operation, closure and decommissioning activities can be expected from approximately FY 2042.

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 policy at the time.

Closure would see the loss of up to 500 operational jobs and may see some outflow of population from the Isaac LGA if other comparable jobs are not available. It is possible that closure will cause community anxiety regarding loss of benefits accruing from the mine, however given the large number of existing and proposed projects in the Bowen Basin, it is also possible the cessation would have little effect on local communities.

A workforce of approximately 20 people is expected to be required for the decommissioning and rehabilitation process. Personnel working on the rehabilitation and decommissioning program will travel to and from the Project Site based on their working arrangements. Depending on the skills required and local availability this is likely to include some non-local personnel who would be accommodated in accommodation villages, either on the Project Site or in Dysart or Moranbah.

BMA, in consultation with relevant parties, will review all infrastructure assets towards the close of the Project and assess which structures will be retained for potential beneficial use, sold for recycling or relocation, or disposed of as general or regulated waste. Recycling and re-use of the Projects redundant infrastructure using local contractors will be promoted by BMA, and the capacity of local waste management facilities will be considered in the waste management strategy.

### 17.5.9 Summary of impacts

A summary of the impacts identified by SIA stakeholders is provided in Table 17.10

**Table 17.10 SIA stakeholders and key issues**

Stakeholder group	Key issues
IRC	<ul style="list-style-type: none"> <li>strong preference for maximising local employment opportunities through recruitment, process, housing and accommodation management, and relocation incentives</li> <li>limited rental housing availability</li> <li>housing market confidence is starting to return but new investment is limited</li> <li>availability of residential lots in Belyando Estate</li> <li>requirement to demonstrate need for new accommodation villages</li> <li>council's waste management facilities have limited capacity</li> <li>residential and non-residential personnel impact on Council services including waste, water, roads and community facilities including childcare</li> <li>local business opportunities to benefit from Project</li> <li>emergency management communications capacity inadequate</li> <li>social licence to operate must be maintained.</li> </ul>
Landholders	<ul style="list-style-type: none"> <li>very dry weather conditions</li> <li>difficulty recruiting suitably skilled employees</li> <li>noise (trucks and blasting) from the existing Saraji Mine under adverse weather conditions</li> <li>maintenance of co-operative relationship with BMA to maintain agricultural land uses.</li> </ul>

Stakeholder group	Key issues
Barada Barna people	<ul style="list-style-type: none"> <li>cultural heritage protection</li> <li>availability of employment and training pathways for Indigenous people.</li> </ul>
Community members and groups – Moranbah, Dysart, Middlesbrough	<ul style="list-style-type: none"> <li>increase in local apprenticeship and training opportunities employment opportunities required to retain local young people</li> <li>very limited rental housing availability in each potentially affected community</li> <li>transient workforce does not contribute to community in the same way as permanent residents/families do</li> <li>ageing population and the need for support services to retain local seniors.</li> </ul>
Local businesses	<ul style="list-style-type: none"> <li>business activity in Dysart and Middlesbrough still below average but with small signs of recovery, stronger in Moranbah</li> <li>value the BHP Local Buying Program and look forward to Project opportunities</li> <li>competition with mining operations for labour and skilled personnel is expensive and sometimes fruitless</li> <li>increased population leads to increased expenditure and business vitality.</li> </ul>
Social infrastructure providers and community organisations	<ul style="list-style-type: none"> <li>cumulative impacts of mining industry growth on health and emergency services</li> <li>non-resident personnel are inadequately considered in Government planning</li> <li>community services are stretched too thinly across multiple communities, which would be exacerbated by population growth</li> <li>recent increase in drug and alcohol use and domestic/occupational violence</li> <li>recruitment and retention of community services and government staff</li> <li>increasing numbers of transient families have seen increased social and health issues.</li> </ul>
Government service providers	<ul style="list-style-type: none"> <li>school enrolments have increased in the last 18 months, however turnover is high, with higher numbers of students with complex needs than previous periods</li> <li>non-resident numbers not captured in catchment population counts for service planning</li> <li>fluctuating demands from population cycles and multiple mining projects affect service capacity</li> <li>lack of service capacity for acute and ongoing mental health care needs</li> <li>skill gaps are emerging with the increase in mining employment</li> <li>health services workforce experience violence in the workplace from some non-resident workforce and as a result of increased drug use</li> <li>indigenous training, employment and business opportunities need to be expanded</li> <li>fewer emergency resources are available in towns when they are required at mine sites</li> <li>increasing demands on hospital, GP and mental health services, as a result of both population increases and FIFO workforce demand.</li> </ul>
Unions	<ul style="list-style-type: none"> <li>increased permanent employment, rather than labour hire or contract options</li> <li>a reduction in FIFO options in favour of increasing local employment</li> <li>ensuring the availability of traineeships and apprenticeships</li> <li>securing wage and condition improvements, including equal pay for equal work performance by employees and labour hire workers</li> <li>sustaining the populations of local towns</li> <li>protection of workforce health and safety including a focus on mental health</li> </ul>

## 17.6 Social Impact Management Plan

The SIA includes a Social Impact Management Plan (SIMP) (refer **Appendix L-1 Social Impact Assessment**) which details how BMA will work with local and regional stakeholders to mitigate social impacts and maximise opportunities identified in relation to the Project. The SIMP includes five management plans for:

- community and stakeholder engagement
- workforce management
- housing and accommodation
- health and community wellbeing
- local business and industry content.

Each management plan articulates:

- the overall purpose of the management plan, including social impacts and opportunities to be addressed
- the desired outcomes of the management plan, to help monitor effectiveness
- the measures designed to mitigate social impacts and enhance opportunities identified during the SIA
- an action plan, providing a practical basis for implementing each measure.

A monitoring program is also provided, including outcomes sought, how management of the impacts will be monitored and reported, and the timing and frequency of monitoring.

Further detail regarding the proposed SIMPs is provided in **Appendix L-1 Social Impact Assessment**.

## 17.7 Significance and residual impacts

This section summarises the key impacts and opportunities of the Project and evaluates their significance, including residual risks and benefits.

The significance evaluation matrix shown in Table 17.11 was developed with reference to Queensland Treasury's *Guidance to Risk Management* (Queensland Treasury 2011), the International Association for Impact Assessment's (IAIA) guidance on evaluating social impacts (IAIA 2015) and the Department of State Development (DSD) (now DSDMIP), SIA guideline risk assessment matrix (DSD 2013). The level of significance (low to very high) reflects the level of risk or benefit for social resources that support quality of life and social sustainability.

Table 17.12 summarises social impacts and benefits and their significance. In the Phase column, 'C' denotes that the impact or benefit could occur during construction, 'O' denotes relevance to the operational period, and 'C/O' denotes relevance to both phases. In the 'Nature' column, '✓' denotes a positive impact or opportunity, and 'X' denotes a negative impact.

Mitigation and enhancement strategies which address each significant impact and benefit are detailed in Section 17.5.

Table 17.11 Significance assessment criteria

Likelihood	Consequence			
	Minor	Moderate	Major	Critical
<b>A: Unlikely</b>	A1 Low	A2 Medium	A3 High	A4 High
<b>B: Possible</b>	B1 Low	B2 Medium	B3 High	B4 Very high
<b>C: Likely</b>	C1 Medium	C2 High	C3 High	C4 Very high
<b>D: Certain</b>	D Medium	D2 High	D3 Very high	D4 Very high



Table 17.12 Summary and significance

Impact/opportunity	Phase	Nature	Stakeholders	Signif.	Mitigation/ Enhancement	Residual Risk/benefit
<b>Community and stakeholders</b>						
Nearby landholders may experience occasional impacts to amenity as a result of noise or dust from the Project Site	O	×	Residents of seven nearby homesteads	C1	Agreements with affected landholders	B1
Support for local towns identity as mining towns	O	✓	Dysart, Moranbah and potentially Middlemount communities	D1	Recruitment strategy with a focus on Isaac LGA residents	D2
Positive contribution to community cohesion through increased long term mining employment and population increases	O	✓	IRC Dysart, Moranbah and potentially Middlemount communities	D1	BMA's Community Development partnerships and programs	D2
Potential for non-resident personnel to change social dynamics in local communities, particularly in the context of cumulative impacts	C/O	×	IRC Dysart and Moranbah communities Community organisations	C2	Accommodation village provision for construction workers BMA Workplace Conduct Policy BMA's Community Development partnerships and programs	B1
Surface disturbance of approximately 1,155 ha during the project's operations phase, and changes to landform as a result of subsidence	O	×	Nearby landholders IRC	D2	Rehabilitation in accordance with <b>Chapter 5 Land Resources, Appendix K-1 Rehabilitation Management Plan</b> and <b>Appendix K-2 Subsidence Management Plan</b>	B1
Potential to strengthen population growth and community cohesion in Dysart, Moranbah, Middlemount and the Isaac LGA as a whole through direct and indirect employment	O	✓	Dysart, Moranbah and Middlemount communities and businesses IRC Community organisations	C1	BMA's Community Development partnerships and programs BMA housing provision	C2

Impact/opportunity	Phase	Nature	Stakeholders	Signif.	Mitigation/ Enhancement	Residual Risk/benefit
<b>Employment</b>						
Construction would offer up to 1,000 jobs by FY 2022, benefitting construction industry personnel from the local, regional and broader (Queensland) areas	C	✓	Construction employees in the Isaac, Mackay and other LGAs. Heavy and civil construction companies in the Isaac and Mackay LGAs	C2	Businesses and industry engagement and procurement strategies	D2
At full development (potentially by FY 2025), up to 500 operational personnel would be employed. Recruitment of local personnel will ensure that local community members benefit from the Project's employment and training opportunities	O	✓	Existing employed, underemployed and unemployed mining workforce, and new recruits to mining Local young people	D2	Recruitment strategy Supporting settlement strategy BMA housing provision	D1
Contribution to competition for skilled labour within the Isaac LGA and MIW region	O	×	IRC Government and community agencies Business and residents	C2	Recruitment strategy Training and workforce development strategies	B1
Increased long-term availability of mining employment in the Isaac LGA and contribution to employment diversification through increased underground mining opportunities	O	✓	Dysart, Moranbah and Middledmount workforce, communities and businesses	C1	Recruitment strategy Training and development strategy	D2
BMA's Indigenous participation goal of 5.75 per cent Indigenous employment target by FY20 will see an increase in employment opportunity for Indigenous people	O	✓	Indigenous mining industry workforce, jobseekers and families Training organisations Indigenous businesses	C1	Recruitment strategy Training and development strategy Indigenous Economic Empowerment Plan	C2
BMA's workforce diversity goal for a 50 per cent female workforce overall by FY20	O	✓	Employees and families	C2	Recruitment strategy Training and development strategy	C3

Impact/opportunity	Phase	Nature	Stakeholders	Signif.	Mitigation/ Enhancement	Residual Risk/benefit
will see an increase in employment opportunity for local and other women						
Availability of apprenticeships and training opportunities, with local young people the primary recruitment pool	O	✓	Young people in Isaac LGA communities Training providers including CTEC	C2	Training and development strategy	C3
<b>Population and housing</b>						
Compared to the FTE population (non-resident plus estimated residential population), an increase of approximately 2.5% on the estimated FTE population in Isaac LGA in 2023	C	×	IRC Government and community agencies Dysart and Moranbah, communities	D2	Accommodation village provision for construction workers BMA Workplace Conduct Policy BMA's Community Development partnerships and programs	C1
Requirement for accommodation of an estimated 900-1,000 beds	C	–	IRC and local residents Workforce accommodation providers	D3	Provision of accommodation village for construction phase on the mining lease	B1
Resident population increase in the Isaac LGA in the order of 270 people supporting planned population growth	O	✓	Dysart, Moranbah and Middlemount workforce, communities and businesses	B1	BMA housing strategy BMA's Community Development partnerships and programs Engagement with IRC on shared value matters such as infrastructure development and community amenity	C1
Total population increases (resident plus non-residents) of approximately 1.33 per cent in 2025, increasing demands on local infrastructure	O	×	IRC Government and community agencies Dysart and Moranbah, communities	C1	BMA's Community Development partnerships and programs	B1
Contractors' housing requirements and population increases as a result of indirect employment may cause increases in rental housing costs but are likely to be offset by market stimulation	O	×	IRC Government and community agencies Dysart and Moranbah, communities	B2	Accommodation village provision and requirement for contractors to stay in accommodation village if the rental market is tight i.e. less than 2.5% vacancy rate.	B1

Impact/opportunity	Phase	Nature	Stakeholders	Signif.	Mitigation/ Enhancement	Residual Risk/benefit
					Lease of surplus BMA housing to contractors.	
An estimated 130 dwellings could be required to house new local residents, primarily in Dysart and Moranbah	O	×	IRC and local residents Government and community agencies Dysart and Moranbah communities	B3	Provision of BMA-owned, subsidised housing to personnel settling in the Isaac LGA Provision of access to BMA housing for contractors if shortfall identified	B1
<b>Health and wellbeing</b>						
An estimated 900 non-local workforce at peak construction may translate to demand for approximately 0.08 of a GP and increased demands on hospital, emergency and mental health services	C	×	IRC Government and community agencies Moranbah and Dysart Hospitals Dysart and Moranbah communities Queensland Health QPS, QAS and QFES	D2	Health service provision in construction accommodation village Employee Assistance Program Consultation with stakeholders to identify any collaborative responses including advocacy or partnerships to support recruitment of health services staff	C1
Increased demand for GPs in the order up to 0.5 GP as the result of project-related population increases is likely, as well as increased demand for hospital and mental health services	O	×		C2	Engagement with IRC, Queensland Health, QPS, QAS and QFES to develop collaborative responses BMA's Community Development focus on health promotion	B1
Increase demand for Police, Ambulance and Fire and Rescue Services as a result of population increases and increased non-residential personnel numbers	O	×		D2	Consultation with stakeholders to identify collaborative responses including advocacy or partnerships required to address project impacts	D1

Impact/opportunity	Phase	Nature	Stakeholders	Signif.	Mitigation/ Enhancement	Residual Risk/benefit
New residents are likely to contribute to increased demand for childcare, in the order of at least five long day care places, and four extra out of school hours care places. Increased family support services may also be required	O	✖	Employees, Childcare centres IRC DCCSDS MDSS and DCSG	D1	Identify employees' childcare needs, and if necessary, collaborate with IRC, other mining companies and the DCCSDS to identify possible solutions	C1
With a population increase of 270 people, there would be a demand for approximately four prep enrolments, 37 Year 1-10 enrolments, and up to seven Year 11-12 enrolments.	O	✖	Department of Education Moranbah, Dysart and Middlemount schools	C2	Advice to Department of Education and Training, and local schools, on workforce ramp-up	B1
Population increase will increase demand for settlement and community support services	O	✖	IRC MDSS DGSG Government and community agencies Moranbah, Dysart and Middlemount communities DCCSDS	D2	BMA's Community Development partnerships and programs	D1
Increased demand for recreational and cultural services, with commensurate need for increases in volunteer resources, with some potential to increase volunteer resources through increasing the population	O	✖	IRC Community, recreational and cultural organisations	C2	BMA's Community Development focus on development of volunteer resources and support structures	C1
Potential to enhance the wellbeing of project personnel and families through long term, well paid employment,	O	✓	Project personnel and families	D2	Not required	D2

Impact/opportunity	Phase	Nature	Stakeholders	Signif.	Mitigation/ Enhancement	Residual Risk/benefit
affordable housing and well-serviced communities						
<b>Local business and industry</b>						
Potential to contribute positively to local business through demand for local goods and services	C	✓	Businesses in Isaac, Central Highlands and Mackay LGAs	C1	Local Buying Program	C2
Long term opportunities for local, regional and Indigenous businesses to supply the Project	O	✓	Businesses in Isaac, Central Highlands and Mackay LGAs	D1	Local Buying Program Local and Indigenous Sourcing Strategy	D2
Project demands for personnel and supplies may exacerbate current skills shortages and contribute to a drain of labour from local businesses and services to the Project	O	×	Businesses in Isaac, Central Highlands and Mackay LGAs	C2	C-Res business capacity building program Training and development programs	B1
<b>Cumulative impacts</b>						
The magnitude and timing of cumulative impacts are uncertain, however construction of more than one major project in a similar time frame as the Project is likely to strain social infrastructure (particularly health and emergency services) and may affect perceptions of community safety, traffic safety or access to services. If there is insufficient capacity to accommodate non-local personnel, housing impacts are likely	C	×	IRC MDSS DGSG Moranbah, Dysart and Middlemount communities Office of Coordinator-General Queensland Health Queensland Police, QAS and QFES DCCSDS Department of Housing and Public Works	B2	Support for IRC advocacy for Government resources for service provision to match total FTE population Advice to IRC, Queensland Government agencies and local health service providers regarding workforce ramp up, site arrangements and location Development of protocols with Queensland Police, QAS and QFES Provision of housing and accommodation for BMA personnel	B1



Impact/opportunity	Phase	Nature	Stakeholders	Signif.	Mitigation/ Enhancement	Residual Risk/benefit
Cumulative demands on Council infrastructure, community services, health and emergency services, schools, childcare and recreational infrastructure are likely as the result of multiple new coal mining operations commencing operation in the Isaac LGA. Significant demands on local housing stocks are possible, with potential for rent inflation and displacement of local residents and key workforce	O	x		B4	C-Res business capacity building programs BMA community development partnerships and programs	B2

## 17.8 Summary and conclusions

Impacts and opportunities identified in the SIA are as follows:

### Community and stakeholders

- nearby landholders may experience occasional noise or dust impacts, which will be mitigated in accordance with their co-existence agreements with BMA
- potential for non-resident personnel to change social dynamics in local communities, particularly in the context of cumulative impacts
- surface disturbance of approximately 1,155 ha during the Project's operations phase and changes to landform as a result of subsidence will result from the Project, and will be progressively rehabilitated
- the Project will provide support for local towns' identities as mining towns
- a positive contribution to community cohesion is likely through increased long-term mining employment and population increases
- there is potential to strengthen population growth in Dysart, Moranbah, Middlemount and the Isaac LGA as a whole through direct and indirect employment.

### Employment

- construction of the Project would offer up to 1,000 jobs by FY 2022
- at full development (potentially by FY 2025), up to 500 operational jobs would be available
- recruitment and training strategies will ensure that local community members benefit from the Project's employment and training opportunities
- the Project will support long-term availability of mining employment in the Isaac LGA and a contribution to employment diversification through increased underground mining opportunities
- BHP's Indigenous participation goal of 5.75 per cent Indigenous employment target by 2025 will see an increase in employment opportunity for Indigenous people
- BHP's workforce diversity goal for a 50 per cent female workforce overall by 2025 will see an increase in employment opportunity for local and other women
- approximately 10 apprenticeships and training opportunities would be available, with local young people the primary recruitment pool
- the Project would contribute to competition for skilled labour within the Isaac LGA and MIW region.

### Population and housing

- during peak operations, a resident population increase in the Isaac LGA in the order of 270 people is estimated, supporting planned population growth
- the Project may result in total population increases (resident plus non-residents) of approximately 1.29 per cent in 2025, supporting planned population growth and increasing demands on local infrastructure
- contractor's housing requirements and population increases as a result of indirect employment may cause increases in rental housing costs but are likely to be offset by housing market growth
- an estimated 130 dwellings could be required to house new local residents, primarily in Dysart and Moranbah.

## Health and wellbeing

- an estimated 900 non-local personnel at construction peak may translate to demand for approximately 0.08 of a GP and increased demands on hospital, emergency and mental health services
- the Project's operation is likely to result in increased demand for GPs in the order of up to 0.5 GP as the result of project-related population increases is likely, as well as increased demand for hospital and mental health services
- increased demand for Police, Ambulance and Fire and Rescue Services as a result of population increases and increased non-residential personnel numbers is expected
- new residents are likely to contribute to increased demand for childcare, and increased family support services may also be required
- new residents are likely to increase demand for school enrolments. With 270 additional residents, approximately 48 school enrolments may result in the Isaac LGA
- population increases will increase demand for settlement and community support services and recreational and cultural services
- there is potential to increase volunteer resources through increasing the local population of long term families
- the availability of Project employment will enhance the wellbeing of Project personnel and families through long term, well paid employment, affordable housing and well-serviced communities.

## Local business and industry

- the Project would contribute positively to local businesses through demand for local goods and services
- the Project will offer long term opportunities for local, regional and Indigenous businesses to supply the Project
- demands for personnel and supplies may exacerbate current skills shortages and contribute to a drain of labour from local businesses and services to the Project.

## Conclusion

Community sentiment in the Isaac region is that new mining operations are supported, with the availability of local employment, business supply opportunities and potential population growth driving this support. The Project's location mitigates direct negative impacts on nearby communities, and a range of positive impacts relating to employment opportunities, population growth and reinforcement of Isaac LGA communities' identity and sustainability are likely.

BMA has established relationships with local stakeholders and communities which will support a cooperative and adaptive approach to mitigation and management of social impacts. BMA also has a range of established strategies including the RAP, CDMP and Local Buying program which will ensure that local communities benefit from the Project's construction and operations.