

SARAJI EAST MINING LEASE PROJECT

Environmental Impact Statement

Chapter 17 Social

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17.0 Social

17.1 Introduction

BM Alliance Coal Operations Pty Ltd (BMA) is seeking approval to develop the Saraji East Mining Lease Project (the Project) involving a single-seam underground mine and supporting infrastructure on Mining Lease Application (MLA) 70383 and MLA 70459 adjacent to, and accessed through, the existing open cut mine void within Mining Lease (ML) 1775. The Project will be adjacent to, but largely operate independently from, the existing Saraji open cut mining operations located approximately 30 kilometres (km) north of Dysart, Queensland.

This chapter of the Environmental Impact Statement (EIS) is a summary of the Social Impact Assessment (SIA) (**Appendix L-1 Social Impact Assessment**) 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) (now Department of State Development, Infrastructure, Local Government and Planning (DSDILGP)) 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 town's 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 process, but following consideration of SIA-related consultation with the Office of the Coordinator-General (OCG) (i.e. administering agency of the SSRC Act) and the Isaac Regional Council (IRC) after the completion of the study for 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.

For the purposes of this assessment, project construction was assumed to commence in 2023 with mine development (set up and construction of the mine portal) during the first year of construction, followed by construction of a Coal Handling and Processing Plant (CHPP), Mine Infrastructure Area (MIA) and associated infrastructure in the second year of construction. Mining was assumed to commence in 2025, with full operation anticipated in the third year of operations (2027).

It should be noted that BMA has not made an investment decision to proceed with the Project. This decision will be dependent on demand for coal, and be made in the context of investment decisions across BMA's other assets.

As described in **Appendix L-1 Social Impact Assessment**, 12 months prior to the commencement of project construction, BMA will review any changes to the Project, and engage with IRC to jointly consider any changes to social conditions and social impacts. If a material change in social impacts is foreseen, BMA will revise the mitigation measures to address the expected change in social impacts.

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 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 objective 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 Coordinator-General's *Social Impact Assessment Guideline* (SIA Guideline) (Queensland Government, 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 to 'manage the impact and support coexistence of resource activities and other regulated activities in areas of regional interest' (DILGP, 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 Broadsound 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 Broadsound 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 and any planning scheme amendments required to facilitate the Project.

17.2.6 Isaac Regional Planning Scheme

The new Isaac Regional Planning Scheme was adopted by IRC on 4 February 2021 and came into effect on 1 April 2021.

The Planning Scheme describes the Isaac Region as geographically, climatically and economically diverse, with land uses including intensive aquaculture, agricultural and small-scale settlements on the coast, to broad hectare grazing, cropping, mining and larger urban settlements inland. The Planning Scheme also notes that the Isaac LGA 'has a strong historical, current and future connection with mining and the resources sector', and 'global policy and market influences are felt directly within Isaac's communities and economy', making it difficult to predict population fluctuations.

With respect to town centres, the vision for the Isaac region in 2036 includes the following strategic outcomes:

- Moranbah is the region's largest administrative centre providing diverse urban and community services and infrastructure, supporting the local and regional community, including small and medium businesses, education, health, government and administrative services, regional facilities and tourism and visitor facilities
- Moranbah, Clermont, Nebo, Middlemount, Dysart and Glenden are resilient towns providing a wide range of housing, small business, industry and employment opportunities
- urban services and infrastructure support permanent residents, non-resident workers and visitors to the region.

The strategic outcomes for housing choice and diversity include:

- existing urban areas are the focus for the majority of housing growth through a mix of infill development within urban settlements and greenfield urban development in the Emerging Community zone which includes Belyando Estate and on Cunningham Way and Grosvenor Drive in Moranbah
- non-resident workforce accommodation is provided in response to a legitimate and demonstrated need, and located in areas that do not result in unacceptable impacts, including cumulative impacts on established towns and communities
- Council does not support workforce arrangements that reduce a worker's choice to live in the region and have their housing needs met by permanent housing options within the region's established communities.

With respect to social infrastructure, strategic outcomes include:

- residents, visitors and non-resident workers have access to a network of well-located social infrastructure that meets community needs and promotes a rich and active community life
- community services, facilities and a range of civic spaces are concentrated in the region's centres, so that centres become hubs for community life and interaction
- social infrastructure is provided in a timely, cost effective and efficient manner, and is designed to be multi-purpose, flexible and adaptable.

The SIA considers the Planning Scheme's guidance where relevant, e.g. assessment of housing demands and solutions and contributions to social infrastructure.

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.

17.2.8 Social sustainability and social infrastructure strategies

IRC has a Social Sustainability Policy which includes as guiding principles:

- avoiding narrow definitions of social infrastructure which lead to missed opportunities in developing social capital as a determinant of social sustainability
- enhancing planning approaches based on demographics and population projections with demand driven principled approaches tailored to the unique characteristics and circumstances of communities.

Social infrastructure is defined in IRC's Social Sustainability Policy as including the 'physical conditions, assets and attributes (built, natural and service based) which enable social capital development within communities and society'. IRC is developing a Social Infrastructure Plan. The social infrastructure planning process includes a social infrastructure audit, needs analysis and strategy development, and the development of guidelines and a process to establish a 'social impact assessment lens' for all projects (Council and private).

17.2.9 Queensland Government policies

The Queensland Government has several policy initiatives which support increased skills training, employment and supply opportunities. A summary of these policies is provided in Table 1.2 of **Appendix L-1 Social Impact Assessment**.

17.3 Methodology

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

17.3.1 Literature review

A review of relevant recent research, local, regional and State plans and policies, and social impact assessments relevant to the SIA study area was undertaken. Research findings were incorporated in relevant sections as referenced.

17.3.2 Scoping

The SIA scoping process considered SIA requirements, the Project's location, the settlement pattern and the characteristics of local communities and regions.

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 considered 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) 2023) and up to 500 personnel at full operational development (assumed to be achieved by FY2025). Employment numbers are full time equivalent (FTE) estimations. Project personnel will be given the option of locally based employment or commuting arrangements.

17.3.3 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, traditional owners, 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 Suburbs and Localities (SAL), and the Broadsound-Nebo SA2 includes Dysart, Middlemount, Coppabella, Nebo and Glenden SALs.

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.

DES placed the EIS on public display and invited public and agency submissions between 24 May 2021 and 2 July 2021. A total of 30 submissions were received, of which four (OCG, IRC, Department of Seniors, Disability Services and Aboriginal and Torres Strait Islander Partnerships (DSDSATSIP) and Queensland Fire and Emergency Services (QFES)) made comments of relevance to the SIA. The SIA has been updated to reflect these submissions.

17.3.4 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.

Outside of changes to environmental conditions near the Project (such as noise impacts on sensitive receptors or changes to the air quality) and changes to traffic volumes, the key driver for social impacts and benefits in the Isaac LGA as a result of BMA's operations is an increase in employment and therefore increased economic opportunity, and increased demands for housing and accommodation, social infrastructure and community development. Where relevant, the assessment considers any differentiation in impacts according to whether the Project would maintain coal production and employment levels or increase production and employment levels.

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 Australian Bureau of Statistics (ABS) Census 2021 data, Queensland Government Statisticians' Office (QGSO) population projections, 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.

During the process of updating the SIA, minor changes were made to the assessment to reflect changes to baseline conditions, including changes to population sizes, vulnerability to housing impacts and labour availability.

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.

17.3.5 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.

Council's formal response to the updated SIA was sought during February-June 2023 but had not been received by the date the updated EIS was submitted to DES. BMA will continue to seek Council's review of the updated SIA and provide any feedback received to DES for their consideration. BMA expects that any outstanding issues will be resolved with Council prior to the commencement of construction of the Project, with a final SIMP to be prepared in consultation with Council, prior to construction commencing.

Table 17-1 SIA engagement stakeholders and engagement strategies

Stakeholder	Engagement strategies
Isaac Regional Council	- a meeting was held with IRC representatives on 1 April 2022 to provide an update on the Project and how BMA is responding to submissions on the SIA. - a second meeting was held on 29 April 2022 to discuss Council's submission and seek further input from Council. - the draft updated SIA was presented to IRC for their feedback in November 2022. - BMA and IRC met on 27 February 2023 to review IRC officers' comments on the updated SIA. Council's formal response to the updated SIA was sought during February-June 2023 but had not been received by the date the EIS was submitted to DES. BMA will continue to seek Council's review of the updated SIA and provide any feedback received to DES for their consideration. BMA expects that any outstanding issues will be resolved with Council prior to the commencement of construction of the Project, with a final SIMP to be prepared in consultation with Council, prior to construction commencing.
Barada Barna Aboriginal Corporation (BBAC)	- SIA enquiry framework provided for BMA meeting with BBAC (July 2018) - BBAC were advised that the EIS was being updated, provided with a letter and updated SIA summary as described above, and were offered a meeting to discuss the Project and the EIS (planned for June/July 2023).
Nearby landholders	- on-property meetings with directly affected landholders (June 2018) - a letter and updated SIA summary were provided to the three nearby landholders, with an invitation for them to seek further information and provide feedback on the SIA and/or SIMP (planned for June/July 2023).
Community and government service providers	The Smart Transformation Advisory Councils (supported by BMA) commissioned research on the adequacy of health and emergency services in Moranbah and Dysart during 2021. This involved consultation with IRC, local hospital directors, ambulance officers, police and QFES representatives and Queensland Health, by the consultant responsible for the Project SIA. The results of this study are described as part of the social baseline and considered in the impact assessment. A letter and updated SIA summary were provided via emails to all local schools and hospitals in Moranbah and Dysart, local police, fire and ambulance services, Department of Communities, Housing and Digital Economy (DCHDE), Queensland Health,

Stakeholder	Engagement strategies
	DSDSATSIP, DESBT and DSDILGP Regional Development, inviting their feedback. (planned for July 2023).
Local community members and businesses	- community information about the Project and SIA (June 2018) (fact sheets and feedback forms) - local community and business workshops (June 2018) in Moranbah, Dysart and Middlemount - letters and the Updated SIA summary were provided to members of the Dysart and Moranbah Smart Transformations Advisory Committees (April 2023) - information about the Project and the updated EIS was provided through Community Connect, a BMA newsletter that reaches more than 15,000 households in Central Queensland, (March/April 2023 edition), inviting community members to contact the BMA Community team for discussion - information about the Project and the updated SIA was provided through Moranbah Community News and Dysart Diary in April 2023 - a letter and the Updated SIA summary were provided to the Moranbah Traders Association.
OCG and Department of Environment and Science (DES)	- OCG Meeting (March 2018) - SIA scope and process - provision of SIA scope for DES review (April 2018) - provision of preliminary draft SIA for review (March 2019) - provision of draft SIA for DES review (July 2019).
Social and health infrastructure providers	- community workshop participation (June 2018) - phone interviews (July 2018).
Government agencies	Workshop participation (June 2018) - Moranbah Hospital - Dysart Police - Middlemount Community School. Interviews (June-July 2018) - Moranbah State School - Moranbah East State School - Moranbah Police - QFES, Mackay Country Command. The Smart Transformation Advisory Councils commissioned research on the adequacy of health and emergency services in Moranbah and Dysart during 2021. This involved consultation with IRC, local hospital directors, ambulance officers, police and QFES representatives, and Queensland Health, by the consultant responsible for the Project's SIA. The results of this study are described as part of the social baseline and considered in the impact assessment. Information about the Project and the updated SIA were provided via emails to all local schools and hospitals in Moranbah and Dysart, local police, fire and ambulance services, DCHDE, Queensland Health, DSDSATSIP, DESBT and DSDILGP Regional Development, inviting their feedback, during March-April 2023.
Unions	Email project information and invitation to SIA workshop Construction, Forestry, Maritime, Mining and Energy Union.

A full list of the stakeholders to whom letters and the updated SIA summary were sent to is provided in **Appendix L-1 Social Impact Assessment**.

A summary of the impacts identified by SIA stakeholders is provided in Table 17-2.

Table 17-2 SIA stakeholders and key issues

Stakeholder group	Key issues
IRC	• strong preference for maximising local employment opportunities through recruitment, process, housing and accommodation management, and relocation incentives • concern regarding the transience of contract workers and consequent social impacts • approach to social investment as relevant to the Project's impacts • timing for delivery of management measures beyond the third year of operations • limited rental housing availability • availability of residential lots, however new investment is limited • requirement to demonstrate need for new accommodation villages • very limited rental housing availability • increasing pressure on services and businesses due to a lack of housing • council's waste management facilities have limited capacity • residential and non-residential personnel impact on Council services including waste, water, roads and community facilities including childcare • local business opportunities to benefit from Project • emergency management communications capacity inadequate • social licence to operate must be maintained • expectation of net benefit for local communities • expectation that BMA will prioritise local employment over commuting arrangements • expectation that BMA will mitigate indirect housing impacts • expectation that BMA will provide additional community investment, commensurate with Project demand.
Landholders	• difficulty recruiting suitably skilled employees • noise (trucks and blasting) from the existing Saraji Mine under adverse weather conditions • maintenance of co-operative relationship with BMA to maintain agricultural land uses.
Barada Barna People/Barada Barna Aboriginal Corporation	• cultural heritage protection • availability of employment and training pathways for Indigenous people • availability of business opportunities for Barada Barna businesses and other Indigenous businesses.
Community members and groups – Moranbah, Dysart, Middlemount	• increase in local apprenticeship and training opportunities employment opportunities required to retain local young people • very limited rental housing availability in each potentially affected community • transient workforce does not contribute to community in the same way as permanent residents/families • ageing population and the need for support services to retain local seniors • housing impacts as the result of non-local contractor demands.
Local businesses	• value the BHP Local Buying Program and look forward to Project opportunities • competition with mining operations for labour and skilled personnel is expensive and sometimes fruitless • increased population leads to increased expenditure and business vitality.
Social infrastructure providers and community organisations: Dysart Community Support Group (DCSG)	• cumulative impacts of mining industry growth on health and emergency services • community services are stretched too thinly across multiple communities, which would be exacerbated by population growth • recruitment and retention of community services and government staff is a challenge

Stakeholder group	Key issues
Emergency and Long Term accommodation Moranbah (ELAM) C&K Middlemount Dysart C&K Kindergarten MDSS Hinterland Community Care (HCC)	- increasing numbers of transient families have seen increased social and health issues - non-resident personnel are inadequately considered in Government planning.
Government service providers: Queensland Health Queensland Police Service (QPS) Queensland Ambulance Service (QAS) QFES Department of Education Dysart State High School Dysart State School Middlemount Community School Moranbah East State School Moranbah State School Moranbah State High School	- school enrolments have increased in the last 18 months, however turnover is high, with higher numbers of students with more complex needs than previous periods - non-resident numbers not captured in catchment population counts for service planning. - fluctuating demands from population cycles and multiple mining projects affect service capacity - lack of service capacity for acute and ongoing mental health care needs - skill gaps are emerging with the increase in mining employment - health services workforce experience violence in the workplace from some non-resident workforce and as a result of increased drug use - Indigenous training, employment and business opportunities need to be expanded - fewer emergency resources are available in towns when they are required at mine sites - increasing demands on hospital, GP and mental health services, as a result of both population increases and FIFO workforce demand.

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.

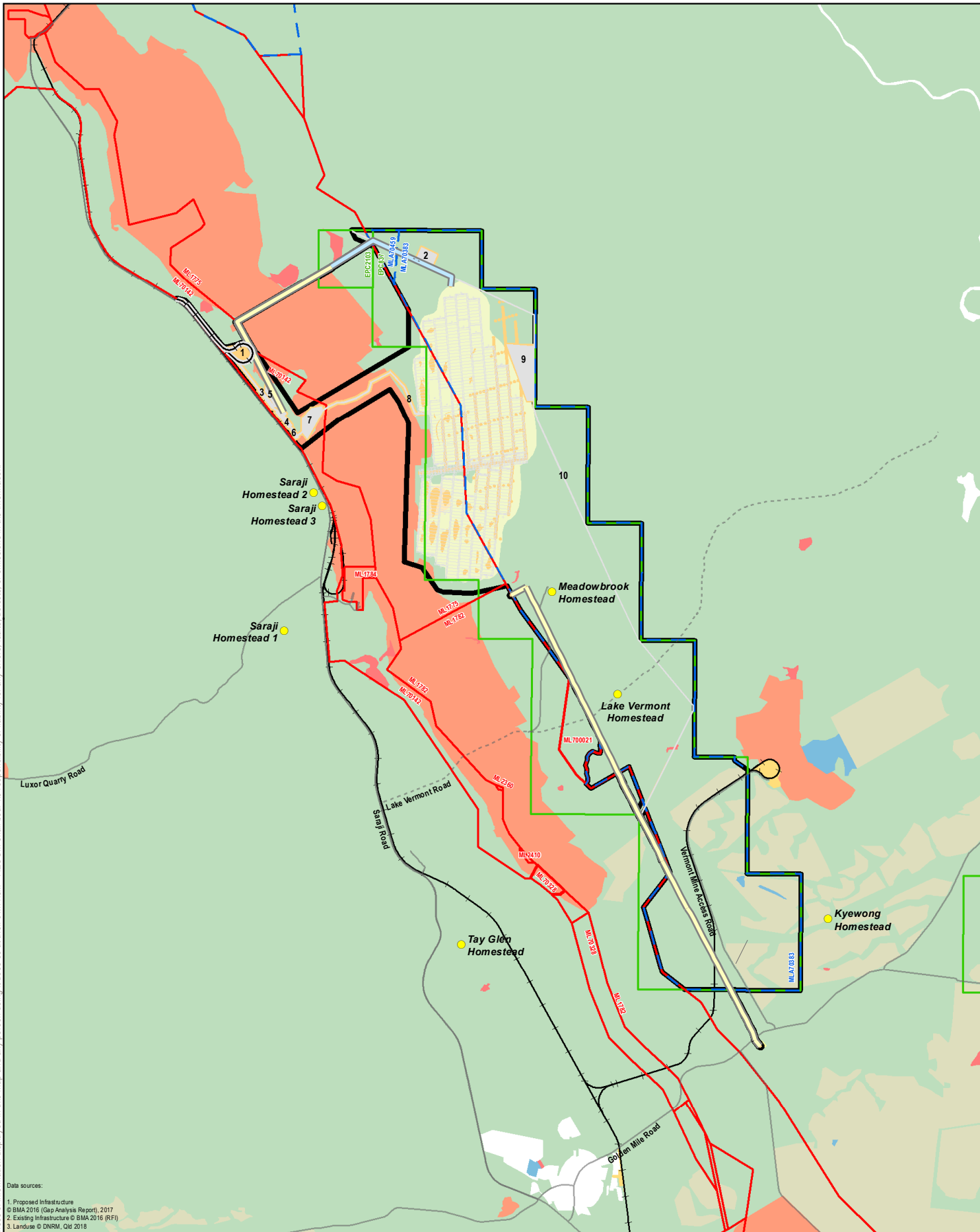
There are seven homesteads located within and in close proximity of the Project Site Table 17-3 and Figure 17-2.

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 17-3 Identified homesteads 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

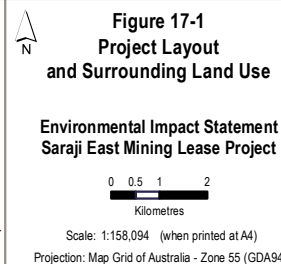
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Data sources:
1. Proposed Infrastructure
© BMA 2016 (Gap Analysis Report), 2017
2. Existing Infrastructure © BMA 2016 (RFI)
3. Landuse © DNRM, Qld 2018

LEGEND

Project Site	Existing Railway	Other minimal use	Surface Infrastructure
Project Footprint - Direct Impact	Private Access Road	Grazing native vegetation	1 Rail Loading Balloon Loop
Project Footprint - Indirect Impact	Public Road	Cropping	2 Process Water Dam
Exploration Permit Coal (EPC)	Homestead	Utilities	3 Product Stockpiles
Mining Lease (ML)	Rail Loop	Transport and communication	4 CHPP
Mining Lease Application (MLA)	Pipeline	Mining	5 Raw Water Dam
Underground Mine Plan	66kV Powerline	Reservoir/dam	6 ROM Pad
Surface Infrastructure			7 Future MIA
			8 Conveyor
			9 Construction Village
			10 Transport and Infrastructure Corridor



DATE: 24/06/2024 VERSION: 5

17.4.2 Potentially affected communities

In defining the SIA Study Area highlighted on Figure 17-2, 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 workday 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.

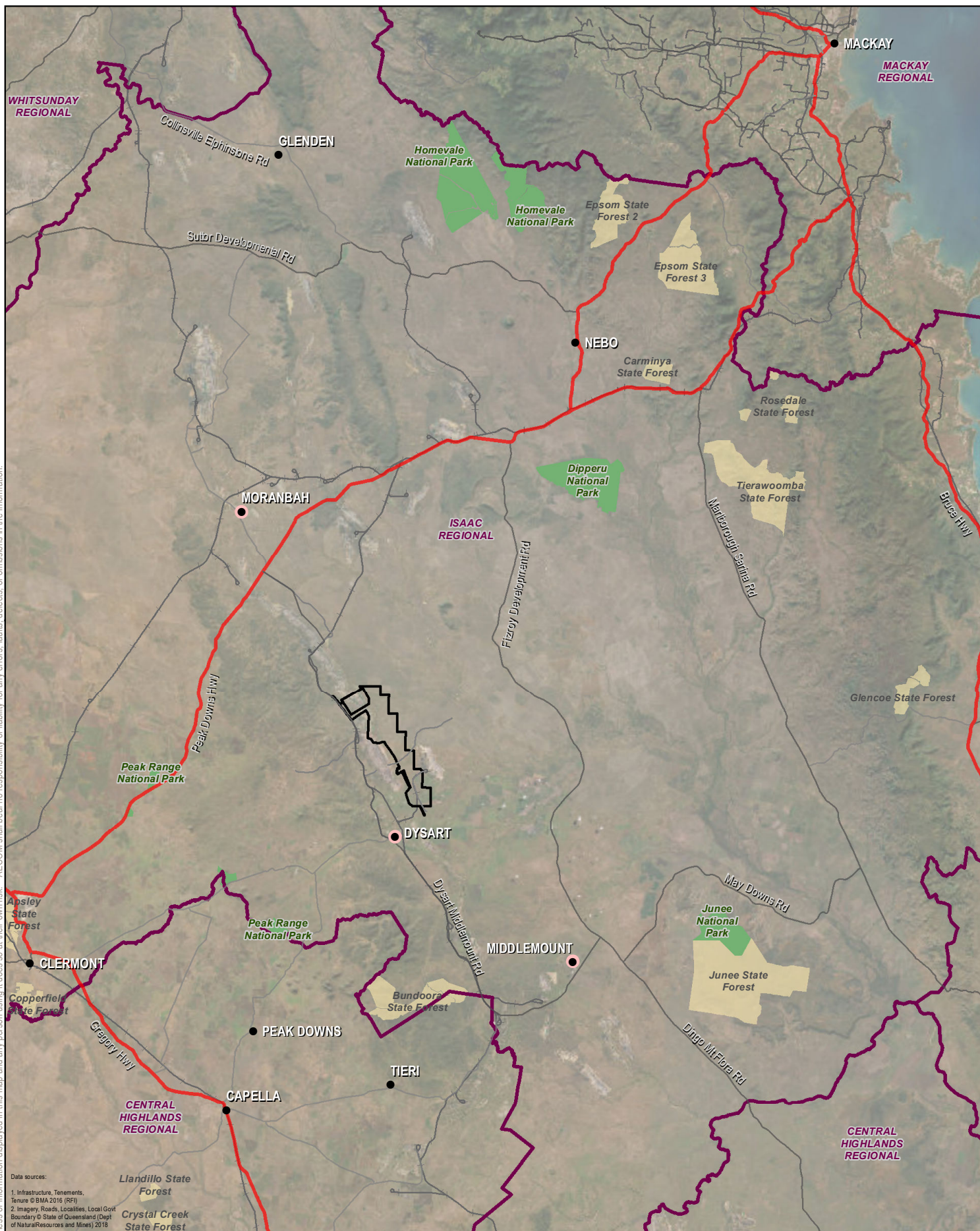
Based on these considerations, the local communities on which the SIA will focus are shown in Table 17-4. The capacity of businesses in other nearby communities to participate in Project supply chains is discussed in the SIA, as is labour force capacity at the broader regional as outlined below.

Table 17-4 Potentially affected communities

Community	2021 Population
Dysart	2,918
Moranbah	9,425
Middlesbrough	1,899
Isaac Regional Council LGA	22,046

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

AECOM does not warrant the accuracy or completeness of information displayed in this map and any person using it does so at their own risk. AECOM shall bear no responsibility or liability for any errors, faults, defects, or omissions in the information.



Data sources:
1. Infrastructure, Tenements, Tenure © BMA 2016 (RPT)
2. Imagery, Roads, Localities, Local Govt Boundary © State of Queensland (Dept of Natural Resources and Mines) 2018

LEGEND

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



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)



DATE: 21/06/2023 VERSION: 1

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) has 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 provision
- housing and accommodation
- business and industry in the region
- employment, labour force and skills.

Social values and conditions identified through consultation, research and analysis are summarised in Table 17-5.

In particular, the ABS and Queensland Government Statistician's Office (QGSO) were consulted for existing social baseline data (ABS 2008, 2011, 2016, 2017, 2021; QGSO 2015, 2016, 2017, 2018).

Table 17-5 Summary of social baseline in SIA Study Area

Social condition/value	Status
Settlement patterns	
Properties near the Project Site	Two cattle breeding properties – Meadowbrook Homestead and Lake Vermont Homestead – may be directly affected by the Project. BMA is the owner of both properties. Two grazing properties are to the south of the Project Site, Tay Glen Homestead and Kyewong Homestead.
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 southwest of Mackay, which is the principal service and activity centre for the MIW region. Moranbah, Dysart and Middlemount were established as purpose-built towns to accommodate mining personnel and their families, therefore the settlement pattern in and near these towns has been directly determined by the mining industry.
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.
Demographic characteristics	
Population size and growth	The Isaac LGA had an estimated resident population (ERP) of 22,046 people as at 30 June 2021. Each of the local communities in the SIA Study Area experienced a decrease in population during 2011-2016 and an increase in population during 2016-2021, except for Dysart which saw a small decrease in population during 2011-2021. 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 5.3 per cent of the Isaac LGA population in 2021 (up from 3.6 per cent in 2016), compared to 4.6 per cent of the Queensland population (up from 4 per cent in 2016).
Non-resident population	The Isaac LGA's FTE population was estimated at 32,990 people at June 2021, of whom 12,080 (36.6 per cent) were non-resident personnel, an decrease of 690 non-resident personnel during 202-2021.
Age	The potentially affected communities have a younger than average population. In 2021, the median age in Dysart, Moranbah and Middlemount was lower by 6-7 years than the Queensland median of 38 years.
Cultural diversity	The proportion of residents that were born overseas was relatively low (at 9.7 per cent of the LGA's population) compared to the Queensland average (22.7 per cent).
Family characteristics	The proportion of family households in the Isaac LGA has decreased from 73.9 per cent in 2016 to 71.3 per cent in 2021 which is now similar to the Queensland average (71.0 per cent).
Social and cultural values	
Culture and identity	Stakeholder inputs during the SIA workshops and interviews indicated that: - each community identifies as a mining community in a rural setting - 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

Social condition/value	Status
	- 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 - community sentiment is that new mining operations are supported - communities wish to be less dependent on mining companies for social infrastructure and employment.
Community cohesion and resilience	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: - a strong preference for maximising local employment opportunities - minimising the development of new workplace accommodation villages in favour of local housing options, unless a clear need can be demonstrated - ensuring that both residents and non-resident personnel are treated equitably in relation to service provision (e.g. emergency and health services) - advocacy for Government recognition of the demands of non-resident personnel on Council, Government and community services, including health services - ensuring the LGA's waste management and water supply infrastructure are adequate to the needs of residents, local business and mining companies - supporting local business participation to Project opportunities.
Training, employment and local business	
Attainment of education	In 2021, 41.2 per cent of Isaac LGA'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 57 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. In 2022, this had increased to 51 apprenticeships for young people from Moranbah, Dysart, Mackay, Blackwater, Emerald, and Central and Northern Queensland.
Community health and safety characteristics	
Health	Findings from a review of relevant demographic, socio-economic and population health statistics for the Isaac LGA indicate high individual and household incomes that support access to health services, however travel distances to major health services are an impediment to optimum health. ABS Census 2021 data indicate that the Isaac LGA had lower percentages of people with long term health conditions than the Queensland average for every condition described. This reflects the younger population as the prevalence of health conditions increases with age.
Mental health	The percentage of people with a mental health condition within the Isaac LGA is at 5.5 per cent and is below the Queensland average of 9.6 per cent. Mental health services have been identified as one of the key health needs through evaluation of relevant research and consultations with local services in 2021.

Social condition/value	Status
Advantage and disadvantage	The 2011 Socio-Economic Indexes for Areas Index of Relative Socio-Economic Advantage and Disadvantage (SEIFA IRSAD) scores indicate that Dysart, Moranbah and Middlemount (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 reflect strong ongoing employment in the mining industry, higher incomes, some subsidised rental housing and large percentages of people with qualifications.
Crime and safety	In 2021, Isaac LGA's offence rates were substantially lower than Queensland's averages. Numbers of domestic and family violence cases were at their highest in 2019 between 2016-2020. Local police noted that breaches represent a small proportion of the calls for service relating from domestic violence. Protection of people experiencing domestic violence and navigating the range of services available are key challenges.
Social infrastructure and services	
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	SIA consultation participants noted: - patients who require treatment beyond basic services are sent to regional hospitals, the nearest being in Mackay - cumulative impacts of mining industry growth are straining health and emergency services, particularly as non-resident personnel are inadequately considered in government planning - increased demands on hospital, GP and mental health services as a result of both population increases and FIFO workforces' demands - no hospitals in Isaac LGA operate birthing facilities, which is expensive and stressful for young families - 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. Key findings from a comparative assessment of hospital and health services in 2021 include: - Moranbah Hospital and Dysart Hospital are nurse-led hospitals with no doctors based at the hospitals. Reliance on external contracted staff can contribute to a lack of continuity of care for patients and a lack of clinical governance at the hospitals - with no doctors available on a full-time permanent basis at the hospitals, residents and visitors rely more heavily on GP services - the need for better access to specialists, mental health professionals and telehealth services was identified as part of a NQPHN consultation process - Moranbah Hospital is designated as a district hospital, while Dysart Hospital is designated as a rural hospital. District hospitals are expected to provide a comprehensive mix of CSCF Level 3 services, however Moranbah and Dysart Hospitals self-assess the majority of their services at Level 1 or Level 2.
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,

Social condition/value	Status
	commensurate with its larger population. An issue described by SIA stakeholders is that 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 Middledmount, there were more than 1,984 unoccupied dwellings on Census night in 2021. There is a high percentage of rented mine-owned housing. 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	The Isaac region has experienced significant fluctuations in housing affordability. 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. 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). 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.
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. This was estimated to have increased to 19,960 beds in 2021. Data provided by IRC indicated that there was a total of 19,052 existing accommodation village beds in the Isaac LGA, with a total approved capacity of 31,698 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 2021 data identified labour force participation features including:

- of the 17,356 Isaac residents aged 15 or over, 62.7 per cent were in the labour force (either working or looking for work)
- the workforce included 1,291 Indigenous people
- women represented 28.7 per cent of the workforce.

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 3,780 people working in the LGA in 2021. By percentage, mining employed 39.5 per cent of residents in 2011, which decreased to 35.6 per cent in 2021.

Mines located in the Isaac LGA and/or serviced by Isaac LGA towns provided approximately 14,361 jobs in 2022, which accounted for 57.7 per cent of the 24,888 jobs supported by the LGA.

Regional labour force

QGSO's analysis of labour force trends for the Mackay SA4 (MIW region) in the year 2021 indicated that:

- the labour force increased by 3,030 people since 2011, with a labour force participation rate of 62.7 per cent
- there were 36,735 people in the Mackay SA4 who were not in the labour force in 2021, which was an increase of 4,553 people (14.1 per cent) since 2011
- the number of unemployed people was 3,523 people, or 2.4 per cent of workers. The increase in people not in the labour force was greater than the increase in labour force participation, indicating an ageing population
- the data indicated that 13.4 per cent of the labour force was employed in the mining industry.

In the Central Queensland SA4 in the year 2021:

- the labour force increased by 4,852 people since 2011, with the number of employed people increasing by 3,471 people and the number of unemployed people increasing by 1,386 people
- The number of people not in the labour force increased by 8,030 since 2011
- the mining industry employed 7.9 per cent of the labour force.

Analysis of mining sector employment numbers in the two regions between 2011 and 2021 identified the following changes:

- in the Mackay SA4, the number of people employed in the mining industry decreased by 4 people (or approximately 0.03 per cent)
- in the Central Queensland SA4, mining employment decreased by 33 people (or approximately 0.37 per cent).

Indigenous employment

Census 2021 data identified there were an estimated 3,358 Indigenous people in the labour force in the Mackay SA4, and an estimated 4,223 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 Broomsound-Nebo SA22 and the Moranbah SA2, and declining to 0.9 per cent in December 2022, compared to the Mackay LGA's 2.4 per cent and the Whitsunday LGA's 2.5 per cent. The Whitsunday LGA has had fluctuating unemployment rates in 2020 due to pandemic-related restrictions on tourism and travel but has dropped in 2021 and 2022 along with the Mackay LGA.

The low unemployment rates seen across the local and regional LGAs are indicative of a low capacity to provide staff for new positions. As overseas migration increases with the post-COVID-19 pandemic recovery period the labour force may increase.

Skill shortages

The DSDMIP (now DSDILGP) 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 skill 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 industry employment data shows that:

- total construction industry employment to August 2021 (239,900 workers) had increased by 6.9 per cent over the year, and by 6.9 per cent over the five-year period, based mainly on increases in residential building construction (National Skills Commission, 2021)
- 18,700 people were employed in heavy and civil engineering construction, which was a decrease of 41.2 per cent over the 12 months, but an increase of 19.6 per cent over the five years (Ibid)
- employment of 'other construction and mining labourers' in Queensland had decreased by 5.1 per cent over the year to August 2021 but had increased by 2.4 per cent over the previous five years.

Operation skills shortages

Skill shortages can be measured by trends in job vacancies. Table 17-6 shows the five year trend in job vacancies in Queensland for key occupational groups required by the mining industry (National Skills Commission, 2021). Over the five years, total vacancies increased from approximately 6,000 in January 2016 to approximately 10,700 in January 2021. The greatest shortages were in the technicians and trade workers occupational groups with more than 7,300 vacancies in January 2021, followed by machinery operators and drivers at almost 3,000 vacancies.

Inputs from a range of stakeholders indicate that the construction, mining and mining service industries are experiencing skills and labour shortages across a broad range of roles. BMA has advised that recruitment for all trades and technicians is currently challenging, with electricians, boiler makers and diesel fitters' roles hardest to fill, and dragline operators, equipment maintainers and drill and blast professionals also in short supply.

Table 17-6 Job vacancies for key occupational groups in the mining industry, Queensland, January 2021

Occupational group	2016	2017	2018	2019	2020	2021
Technicians and trade workers	4,205	5,104	5,478	4,803	3,752	7,321
Machinery operators and drivers	1,496	2,113	2,231	1,705	1,614	2,926
Construction and mining labourers	276	360	337	289	246	476
TOTAL	5,977	7,577	8,046	6,798	5,612	10,723

Business and supply chain

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

- significant thermal and metallurgical coal deposits
- a long-standing agricultural industry
- 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.

A profile of businesses in the Isaac LGA has been developed using QGSO's analyses of ABS counts of registered businesses. Key indicators include:

- approximately 1,861 registered businesses were operating in the Isaac LGA in June 2021, which was an increase of 118 businesses overall over the two year period
- agriculture, forestry and fishing represented the largest number of businesses (779 in 2021), primarily representing the large number of owner-occupied farms and associated small businesses across the LGA
- the construction industry had the next largest number at 195 businesses in June 2021, an increase of 4.3 per cent over the two years
- rental, hiring and real estate services represented the third largest number at 154 businesses in June 2021, with little growth in the two year period
- the number of mining businesses increased from 23 to 27, or 17.4 per cent but from a small base. Mining operations often have their business registrations in a different jurisdiction and therefore are not accurately represented in the statistics.

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 17-7.

Table 17-7 Potential impacts and benefits identified by stakeholders

Impact area	Impacts and benefits
Communities and stakeholders	- potential to strengthen population growth and increase community resources which support wellbeing - potential for noise exceedances to affect amenity at homesteads in the Project vicinity.
Housing and accommodation	- potential for in-migrating personnel's demands to exacerbate rental housing shortages - potential to stimulate investment in housing, including development of residential lots and housing in Belyando Estate - reduced benefits to communities of remote accommodation villages.
Health and wellbeing	- potential to strain council waste management facilities' capacity - residential and non-residential workforces' demand on water supply and roads - exacerbation of current demands on council and health services from non-resident personnel - increasing demands on hospital, GP and mental health services, as a result of both population increases and FIFO workforce's demand - potential to increase demand on community facilities including childcare - potential to increase demand on mental health care services with limited capacity - fewer emergency resources are available in towns when they are required at mine sites.
Local business	- potential to stimulate business activity in Dysart, Moranbah and/or Middlemount through increased population - benefits of BHP's Local Buying Program and Local Buying Foundation plus potential Project opportunities - potential to increase competition with mining operations for labour and skilled personnel - potential for personnel's partners to contribute to the pool of skilled personnel for local services and businesses.
Workforce and employment	- increase in local apprenticeship and training opportunities - employment opportunities which would retain young people in local communities - availability of employment and training pathways for Indigenous people.
Cumulative impacts	- contribution to cumulative impacts of mining industry growth on health and emergency services - potential for contribution to fluctuating demands from population cycles and multiple mining projects to affect service capacity - potential for housing shortages - potential for non-local residents' needs to affect service access.

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.

Homesteads

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, with the nearest State Forest (Bundoorra State Forest) located over 50 km south of the Project Site and the Peak Range National Park located around 40 km west of the Project Site
- 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 hometown 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 community values

BMA has commenced negotiations with the Barada Barna people for a portfolio-wide comprehensive Indigenous Land Use Agreement (ILUA). This site will fall within the proposed agreement area. There would be minimal additional surface impacts within the Project area as a result of the Project, but people would be restricted from accessing land within the Project site whilst mining or infrastructure operation would make access unsafe. During progressive rehabilitation of the Project site, it is likely that Barada Barna business owners would be interested in the opportunity to work on Country in in land management and rehabilitation work.

BMA will manage cultural heritage values in accordance with the ACH Act and a Cultural Heritage Management Plan (CHMP) developed in cooperation with BBAC.

BMA has renamed the Moranbah 'Bunhdhara' Airport and unveiled new artwork designed by Barada Barna artist, Elaine Chambers, to demonstrate its relationship with the Barada Barna People.

BBAC and BMA have also worked together to establish a heritage garden and to commission artworks at Saraji Mine.

In recognition of cultural heritage values and cultural connections between Barada Barna People and Country, the Project will:

- provide signage at the Project entrance and within the site recognising Barada Barna people as the area's traditional owners; and
- provide training about cultural awareness and cultural heritage management to all Project staff.

Barada Barna People would be encouraged and supported to seek employment on the Project during construction, operation and progressive rehabilitation of the Project site. Barada Barna-owned businesses are also likely to be able to contribute to the Project's supply chain. BMA's Indigenous

BHP's Indigenous procurement and employment teams will continue cooperation with BBAC to support their training and procurement goals.

Other Indigenous community members are also interested in employment and training opportunities within BMA operations including new mining projects.

BHP's Reconciliation Action Plan 2023-2027 (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. This RAP also focuses on enabling BHP to enhance relationships and support the company's aspiration to be a partner of choice to Indigenous peoples. 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 June 2023 with site set-up and construction of the mine portal, followed by construction of the coal handling and processing plant (CHPP), mine industrial area (MIA), associated infrastructure conveyor, rail spur and balloon loop. Construction would take approximately two years.

It is estimated a construction workforce of 500 people will be required in Year 1, increasing to 1,000 people during Year 2. 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.

The Mackay and Central Queensland SA4s had a collective 2,183 people employed in heavy and civil engineering construction in 2016, 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 FY2025 (Year 3) and be at full operation by Year 5. 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 the first two years of operation, up to 500 operational personnel would be required. A ramp-down to 260 personnel is likely in Years 19-20, prior to decommissioning and closure.

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 workdays and a roster pattern which is conducive to work/lifestyle balance. This will also allow Isaac LGA residents from outside Moranbah, Dysart and Middlesmoot 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 drive-in drive-out (DIDO)) to 300 personnel.

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
- 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 40 per cent female employment
- the Project will work towards a target of 8.0 per cent Indigenous personnel
- 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 Saraji Road which runs along the western edge of the proposed MIA. Access to the MIA and the CHPP will require one new intersection with Saraji 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 8.0 per cent of its total managed workforce including direct, contracting and labour hire employees by Year 3 of operations.

BHP has also set a goal of gender balance (40 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, 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.

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

Communities in the Isaac LGA are strongly influenced by resource industry cycles, with resident and non-resident populations increasing when industry activity is strong, accompanied by increased demand for housing and social infrastructure. Strong industry activity also results in increased competition for labour.

Business Queensland data shows that the number of people employed in coal mining in Queensland climbed steadily in the three years to December 2019 to reach 38,690 workers, before declining in 2020 and levelling off at 36,196 coal mining employees in December 2021. This may indicate current latent capacity (i.e. availability of skills and labour), but a range of mining companies have recently reported recruitment difficulties.

In view of the employment choices and flexibility the Project will offer, BMA expects to be able to recruit some of the Project's workforce from the Isaac LGA and others from within the Mackay and Central Queensland SA4s, with personnel from other Queensland regions making up the balance. However, skills shortages in key occupations such as technicians, operators and trades are likely to persist.

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
- accommodation in ensuite rooms with state-of the-art light, noise and temperature control
- separation of crews on night and day shift within the WAVs utilised to accommodate operational personnel
- 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
- discouraging the use of private transport by workers.

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 Year 20, 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

This assessment of impacts on population and housing assumed that project construction may commence in FY 2023 (i.e. by June 2023), concluding in FY 2025, with operations commencing in FY 2025. Assessment of changes to population numbers has used these reference years. As described in **Appendix L-1 Social Impact Assessment**, 12 months prior to the commencement of project construction, BMA will review any changes to the Project, and engage with IRC to jointly consider any changes to social conditions and social impacts. If a material change in impacts is foreseen, BMA will revise the mitigation measures to address the expected change in social impacts.

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 FY2023-2024 (Year 1-2) and up to 900 non-local personnel in FY2024-2025 (Year 2-3).

Of these, approximately 75 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 338 people during FY2023-2024 (Year 1-2). 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 in Year 3 and 4 (2025/2026 and 2026/27), and a peak of 500 personnel required from 2027. 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 2.6 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 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 60 per cent 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 260 people by Year 3, equivalent to a 1.1 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 180 non-resident workers on shift by 2027 (Year 5), which would represent an increase of 1.5 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 (Year 3) would represent an increase of approximately 1.2 per cent on the estimated FTE population in 2027 (Year 5).

Table 17-8 Estimated population and housing demand change

Population	2021	2022	2023	2024	2025	2026	2027
Isaac Population (est.)	22,046	22,289	22,534	22,782	23,032	23,286	23,542
Isaac LGA Non-resident personnel (Series B)	12,080	11,160	12,140	11,970	11,640	11,980	11,980
Isaac LGA Estimated FTE (estimated resident personnel + non-resident personnel)	34,126	33,449	34,674	34,752	34,672	35,266	35,522
Estimated construction personnel			500	1000			
Estimated operations personnel					260	260	500
Construction							
Non-resident personnel at 90%			450	900			
Non-resident personnel at 75% on shift			338	675			
Non-resident personnel increase on estimated Isaac LGA FTE			1.0%	1.9%			
Increase on non-res population			2.8%	5.6%			
Operations							
Existing residents					50	50	100
New residential (local) personnel					50	50	100
Estimated commuting total (60%)					156	156	300
Population increase at average 2.6 per household					130	130	260
Increase in estimated resident population (%)					0.6%	0.6%	1.1%
Non-resident personnel (with 60% on shift)					93.6	93.6	180

Population	2021	2022	2023	2024	2025	2026	2027
Increase on estimated non-resident personnel					0.8%	0.8%	1.5%
Increase on estimated FTE (non-resident personnel and new local residents)					0.7%	0.7%	1.2%
Housing requirement							
Housing requirement for 40% existing locals					20	20	40
Family dwellings for new residents at 80%					40	40	80
Shared dwellings for new residents at 20%, 2 people/dwelling					5	5	10
Total dwellings					65	65	130
Number of workforce accommodation village beds required					100	100	200

Note: Population estimation and housing demand change according to assessment scenario timeline.

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 17-9 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	579	530	49
Dysart SPV	BMA	430	430	0
Eureka	Third party, BMA exclusive	1,603	1,550	53
Buffel Park	BMA	1,439	1,300	139
Total BMA		4,051	3,810	241
Leichhardt Village	Third party	580	580	Variable
Dysart Ausco	Third party	400	375	Variable
Dysart Civeo	Third party	280	700	Variable
Total Third Party		1,260	1,655	Variable

This data indicates that the four accommodation villages owned by BMA had a total capacity of 4,051 rooms of which 3,810 rooms were being used, leaving spare capacity of 241 rooms (5.9 per cent). 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 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 2027 (Year 5), 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 considering an employee's needs, the number of dependent children and other relevant family circumstances. BMA provides significant subsidies for housing costs and provides an ongoing housing maintenance and upgrades program.

In May 2022, BMA owned a total of 522 dwellings in Dysart, of which 36 were vacant and ready for allocation, and 108 were under care and maintenance until required, sold or redeveloped, and 880 dwellings in Moranbah, of which 34 were vacant and ready for allocation and two were in care and maintenance.

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 can develop new housing on its vacant and build-ready lots (which include a total of 123 vacant residential lots in Moranbah and residential 21 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 based on 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). 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 believes that the creation of social value is a precondition to shareholder value and is undertaking a planning process to develop a social value framework. This approach goes beyond social investment and encourages collective impact, local activation, empowerment and advocacy.

In 2018, BHP committed that by the end of FY2022, 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.

In addition to contracted partnership programs, BMA supports community wellbeing through its Benefiting My Community Program. The annual small grants program provides grants of up to \$20,000 for grassroots community organisations across the Isaac, Central Highlands and Mackay regions.

As part of the community and social development considerations, BMA has met with IRC to discuss the concept of 'additionality' in the region, i.e. increased community investment and mitigation measures to address additional impacts (such as impacts on housing access, childcare capacity and health services) resulting from the Project.

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
- the agreed waste management strategy
- investments in social infrastructure
- support for the ongoing operations of the BMA-owned Moranbah 'Bunhdhara' Airport.

In-migration of Project personnel coupled with projected increases in non-residential personnel would equate to an increase of 1.2 per cent on the LGA's projected FTE population in 2027 (Year 5), which is not expected to require an increase in physical infrastructure capacity. 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
- encouragement of the use of telehealth services
- 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 450 non-local workforce on shift at peak, this would be equivalent to a demand for approximately 0.1 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, QAS and QFES for responses to traffic accidents and emergencies including injuries and sudden acute illnesses.

BMA will liaise with the 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 260 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 Middlemount doctors) by 2027 (Year 5). With 180 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 18 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.

As businesses, 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, North Queensland Primary Health Network, 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 Middlemount 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 12 months prior to construction, 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.

Childcare

Moranbah, Dysart and Middlemount each have childcare centres with waiting lists.

With a residential population increase of 260 people, new residents may include approximately 19 children 0-4 years (based on the percentage of children of this age in the Isaac LGA in 2021 at 7.2 per cent), some of whom would require childcare. With respect to out of school hours' care, 260 new residents could see approximately 37 new children between 5 and 14 years, and if 19.2 per cent of them required care (as per the DESE survey results, inclusive of 0-5 years). This would see demand for five early learning childcare places and seven out of school hours care places would be required across the LGA. The majority of this demand is likely to be experienced in Dysart, as the majority of BMA housing that would be used by new local residents is located in Dysart. This assumes that the Project will increase rather than just maintain BMA's overall production and employment levels in the Isaac 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 Education and IRC to identify potential responses.

The key constraint on local childcare centres is a lack of suitably skilled and qualified childcare workers, a persisting issue in regional Queensland. BMA will facilitate the recruitment of childcare workers in Dysart and Moranbah by covering the costs of recruitment of childcare workers, including international recruitment if necessary, and commensurate with the additional demands induced by project personal

in Dysart and Moranbah. Support for recruitment will include relocation costs, as well as a wage subsidy for internationally recruited workers. Subject to need and the availability of BMA housing, BMA may make housing available to childcare workers.

Key issues which constrain workforce participation, especially for women, is that there are no overnight childcare 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 Department of Treaty, Aboriginal and Torres Strait Islander Partnerships, Communities and the Arts (DTATSIPCA) 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 number of school enrolments required was estimated using the 2021 proportions of each age group who were attending an education institution. With a population increase of 260 people, there would be a demand for approximately 32 Prep to Year 10 enrolments, and up to seven Year 11-12 enrolments. Increased demand is likely to be experienced primarily in Dysart, with potential for some minor increased demand in Moranbah. Local towns are unlikely to see the full estimated requirement for senior enrolments as a proportion of enrolments (around one third based on local anecdote) will go to private schools in regional centres. Enrolments for younger children are more likely to be required locally.

BMA will monitor the number of school-aged children coming to Moranbah and Dysart with new Project employees and provide advance notice of the number and age of children seeking enrolments to Education Queensland to assist schools to plan for adequate 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 260 Project-related personnel and family members would be an increase of approximately 1.1 per cent on the forecast LGA population in 2027 (according to the assessment scenario). 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 Community Development Management Plan (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 DESBT 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, DESBT 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 32,990 people at June 2021, of whom 20,910 people (63.3 per cent) were residents and 12,080 (36.6 per cent) 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 tradespeople to increase the costs of trades to local residents. BMA has committed to trades training programs, including 10 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:

- access to construction labour and operation personnel
- access to equipment, consumables, professional services, maintenance providers and technical and trades sectors

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

As at December 2021, there were 209 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 142 businesses from across Isaac (43 per cent), Central Highlands (10 per cent and Mackay LGAs (46 per cent). BMA's underground Broadmeadow Mine has a similar local supplier base of 128 businesses from across Isaac (39 per cent), Central Highlands (12 per cent) and Mackay LGA (49 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 48 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.

Effects on agricultural land and businesses

As land within the Project area is owned by CQCA, there would be no direct impacts on agricultural businesses. Land that is suitable for grazing within the Project site will be available e.g. through agistment licences whilst land is not required for mining. As the Project would be an underground mine, and with agricultural uses having co-existed with the operation of the existing Saraji Mine since 1974, impacts on agricultural land uses and associated businesses on adjacent land holdings are not anticipated.

A secondary (S) stock route (405ISAA) is located in the south of the Project Site where the Project's powerline is proposed. The Project would require extension of a power line that will intersect the stock route. If required, BMA will liaise with the IRC and DOR regarding management and mitigation strategies for the temporary closure of the stock route during construction.

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 17-10 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 17-10 Proposed projects within Isaac LGA

Project	Proponent	Location	Status	Peak workforce
Eagle Downs	South 32 and Aquila Coal Pty Ltd	Approximately 20 km southeast of Moranbah	EIS approved with conditions 2010 (EP Act) Care and maintenance since 2015, on hold as at 2020	Construction – 360 Operation – 570
Red Hill Mining Lease Project	BMA	20 km north of Moranbah	EIS approved with conditions June 2015 (SDPWO Act) Timing unknown	Construction – 2,000 Operation – 1,500
Olive Downs Project	Pembroke Resources South Pty Ltd	Approximately 40 km southeast of Moranbah and 40 km north of Dysart	EIS approved with conditions (SDPWO Act) Commenced construction in 2022, with operation expected to commence in 2023.	Construction – 700 Operation – Year 2/3 – 960; Years 14: 1,300
New Lenton Project	New Hope Group	Approximately 65 km northwest of Nebo, 65 km north of Moranbah, and 20 km south of Glenden	EIS suspended 27 June 2018. Timing unknown	Construction – 200 Operation – 300
Winchester South Project	Whitehaven Coal	30 km south of Moranbah	New coal mine, seeking EIS approval Construction could commence in 2022/23, and operation from around 2024.	Construction – 500 Operations – 450
Isaac Downs Project	Stanmore Coal	Approximately 5 km east of Moranbah	Extension to Isaac Plains Complex. Under construction 2020-22, first coal production expected in 2022	Construction – 250 Operations – 300
Lake Vermont Meadowbrook Project	Bowen Basin Coal Pty Ltd	Approximately 30 kilometres northeast of Dysart	Extension to existing Lake Vermont Mine. Seeking EIS approval. Construction may commence in 2023, with operation from around 2026	Construction – 200 Operations – 350 – 400
Carborough Downs Mine	Vale	Approximately 20 km east of Moranbah)	Approved in September 2022	Continuation of currently employed workforce (700)
Ironbark No.1 Mine	Fitzroy Australia Resources	Approximately 30 km northeast of Moranbah	Formerly known as the Ellensfield Coal Project, approved in 2012. Construction commenced January 2022	Construction –160 Operation – 350 persons

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 cumulative 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 DSDI, DES, 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 Year 21. 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 from the impact assessment is provided in Table 17-11.

Table 17-11 Summary of impacts

Area	Stakeholders	Baseline values	Impact/Benefit	Management measures
Community values, land use and settlement				
Indigenous community values	BBAC and Barada Barna People	Native title and cultural heritage impacts are managed in cooperation with BBAC. Barada Barna People are interested in employment opportunities in BMA's operations	Minimal additional surface impacts within the Project area. Barada Barna People would be restricted from accessing land within the Project Site in areas whilst active mining or infrastructure use makes this access unsafe. Post-mining land access may be affected by freehold title. Indigenous training and employment opportunities will be available with the Project	• CHMP • ILUA • Reconciliation Action Plan • Project goal of 8.0 per cent Indigenous employment by Year 3 of operations • cultural recognition strategies.
Land ownership and use	BMA	BMA owns the land on which the Project would operate. The Project would result in an incremental increase in the area of land within the Isaac LGA that is used for mining purposes	As an underground project, surface impacts would be minimised. An area of approximately 1,155 ha will be disturbed for mine infrastructure, including the MIA, CHPP, conveyors, roads and a rail spur and balloon loop, and the infrastructure and transport corridor. Post-mining, the land would be available for rehabilitation towards post mining land uses such as grazing	• post-mining land uses will include safety and suitability for pre-mining land uses.
Landform	Residents of homesteads within 2-3 km	Land within the Project site is used for cattle grazing on native vegetation	Land subsidence above underground mining may occur. Due to the gradual nature of the	• land disturbed by mining infrastructure or subsidence will be

Area	Stakeholders	Baseline values	Impact/Benefit	Management measures
			subsidence, it is expected that grazing activities within the mining lease will continue during mining operations but outside of direct operational areas while any related subsidence occurs	progressively rehabilitated in line with BHP's completion criteria, the Mined Land Rehabilitation Policy and Mineral and Energy Resources (Financial Provisioning) Act 2018 (MERFP Act).
Residential amenity	Residents of homesteads within 2-3 km	Surrounding land uses include mining and grazing interests	Three homesteads on one privately owned property may experience noise impacts	BMA has coexistence agreements with the owners of two relevant neighbouring properties.
	Residents of homesteads within 2-3 km Moranbah and Dysart community members	The Project is located in an area with few sensitive visual receptors and generally low landscape sensitivity	Above-ground infrastructure will result in localised changes to views during construction and operation, primarily experienced by travellers on the Saraji Road and two private homesteads	BMA has coexistence agreements with the owners of two relevant neighbouring properties.
Community identity and functions	Moranbah and Dysart community members	Moranbah, Dysart and Middlemount have strong identities as mining communities	The Project's development is likely to support the identity of Moranbah and Dysart as mining communities and support the communities' function as hometowns for mining personnel. In Dysart, the Project would also strengthen confidence and optimism in the town's future	- provision of subsidised housing for local employees - investment in local communities will support identity and functions as mining communities.
Community cohesion	Moranbah and Dysart community members	Strong social capital and a sense of permanency	Potential for an increase in local populations which is likely to strengthen community	social investment including a focus on community

Area	Stakeholders	Baseline values	Impact/Benefit	Management measures
			resources that contribute to cohesion	initiatives that support well-being.
Employment				
Construction employment	Local and regional construction workers	The construction industry employed 346 Isaac LGA residents in 2016, and the LGA's construction sector comprised 195 businesses in June 2021, an increase of 4.3 per cent since June 2019	Construction could offer up to 1,000 jobs at peak, benefitting construction industry personnel from the local, regional and broader (Queensland) areas. The Isaac LGA's construction industry employees and businesses are well placed to benefit from construction opportunities. Specialist underground construction personnel would also be required.	- require the construction contractor to brief businesses and prospective applicants in Moranbah and Mackay about Project opportunities - provide advance notice of the construction schedule through BMA's Local Buying stakeholder register - ensure Indigenous businesses in the Isaac, Central Queensland and MIW regions are identified and contacted as part of the construction tendering and sub-contracting process.
	Regional and Queensland construction workers	The peak construction workforce requirement would exceed the number of construction workers in the Isaac LGA (in 2016) by almost 200 per cent. Construction workers are mobile and the majority are likely to be drawn from outside the LGAs	If mining construction activity is high when Project construction commences, there is potential to draw construction labour from businesses and industries in Central Queensland that rely on construction skills and labour. If mining construction activity is low, the Project would have less	recruitment using established supply chain of recruitment and labour hire companies in the Mackay and Brisbane, and established relationships with mining construction companies

Area	Stakeholders	Baseline values	Impact/Benefit	Management measures
			impact on other businesses' access to labour and skills	provision of a temporary construction workforce accommodation facility to support recruitment from other Queensland regions.
Operational employment	Mining industry personnel Local residents interested in training for underground mining roles Moranbah and Dysart community members IRC	BMA is projected to employ approximately 8,600 personnel in its Bowen Basin mines in 2023	At full operation, the Project would employ 500 people. Assuming no change in BMA's total production driving an increase in total job numbers during the intervening time, the Project would represent an increase in job numbers (additionality) of approximately 3.0 per cent during Years 1 and 2 of operations, and approximately 5.8 per cent during Years 3-18	- advertising operational positions locally to increase benefits to locally based employees, including a statement that Isaac LGA residents, women and Indigenous people are strongly encouraged to apply - work with BMA's recruitment network and partners (including the Moranbah and Dysart State High Schools, Mackay TAFE, CQU, BBAC and Mackay and Rockhampton-based recruitment and employment support agencies - identify new personnel's housing needs and facilitate provision of housing for personnel who

Area	Stakeholders	Baseline values	Impact/Benefit	Management measures
				wish to move to Moranbah or Dysart.
	Mining industry personnel Local residents interested in training for underground mining roles Moranbah and Dysart community members IRC		If production and therefore employment numbers at other BMA mining projects or other companies' mining operations decrease, the Project would have a negligible effect on employment numbers overall, but would contribute to maintaining employment continuity in the Isaac LGA	Project benefit – mitigation not required.
	Mining operations in the Bowen Basin IRC Local and regional businesses Moranbah Traders Association	Labour force participation is high and unemployment is generally very low in the Isaac LGA. During 2022, there is a large pool of mining personnel from which to draw in the Isaac LGA and in the MIW region, but there is strong competition for skilled labour and trades within the mining industry and other industries across Queensland	If labour conditions remain similar to current conditions, the Project will compete with other mining operations and potentially draw skills and labour from business in other industries for skilled personnel. Mining operations are accustomed to competition between businesses, but if severe shortages occur, mining production could be constrained	- BMA is committed to several projects and partnerships focused on improving access to training and development in the mining and METS sectors - include a focus on training and recruitment of people who are new to the mining industry and/or to underground mining.
		Additional new mining projects are approved or proposed in the Isaac LGA, but may or may not commence	If mining industry growth continues and projects such as Winchester Downs proceed, competition for skilled personnel would increase	as above.

Area	Stakeholders	Baseline values	Impact/Benefit	Management measures
	Mining industry personnel Moranbah and Dysart community members	At least two mines in the Isaac LGA are currently expected to close in the short term	The closure of non-BMA mines is likely to release up to 1,100 skilled mining personnel to the local market during the next five years	monitor announcements of mine closure in the Isaac LGA and MIW and Central Queensland regions, and target recruitment campaigns accordingly to enable Isaac LGA residents to continue working locally at SEMLP.
	Local and regional businesses Moranbah Traders Association	Mining industry activity including direct expenditure and personnel expenditure contributes to indirect employment in the Isaac LGA and the MIW region	The Project is predicted to result in the equivalent of 299 indirect full time jobs, in the MIW SA4	Project benefit – mitigation not required.
Workforce diversity	Women in the mining industry	In FY2021, women represented 29.8 per cent of BHP's employee workforce	BHP is confident of achieving 40 per cent female representation by 2025. The Project is expected to make a strong contribution to this	enhance recruitment practices including employment messaging to target diverse audiences, workforce development and retention through coaching and support, and mentoring and support networks for women.
	Indigenous workers and jobseekers	Indigenous people have higher unemployment rates than other community members in the Isaac LGA and MIW region	The Project will support maintenance of BHP's goal of 8.0 per cent Indigenous personnel, and will plan to achieve this goal within the first three years of operation.	- access to BHP's Talent Acquisition team through schools and Native Title Registered Bodies - flexible work options including job-sharing and part-time roles will be

Area	Stakeholders	Baseline values	Impact/Benefit	Management measures
				available as part of Project employment opportunities - focus on Indigenous young people as part of each apprenticeship recruitment campaign - portfolio-wide social investments support Indigenous education, training and employment pathways.
	Isaac LGA residents with disability	People with disability have limited access to employment compared with other community members	There is potential for the Project to offer employment opportunities to people from within the Isaac LGA who have with disability	- initiate engagement with HCC to identify the employment aspirations of local people with disability - match State Government funding provided to support employment skills development and pathways to employment for people with disability who live in Moranbah or Dysart.
Training and development opportunities	Yong residents and jobseekers in Isaac LGA Training providers	Whilst unemployment is currently very low in the Isaac LGA, local young people maintain an interest in training for mining industry employment. Retention of young people within the Isaac LGA is a key community value	Local young people and people who are new to underground mining would benefit from training and development opportunities to equip them for employment in the Project and the mining industry generally	training and development strategies will include a focus on new entrants to mining and re-training of existing mining personnel for underground mining

Area	Stakeholders	Baseline values	Impact/Benefit	Management measures
				the Project will offer ten apprenticeships by Year 3 and maintain this commitment throughout the Project life.
Closure	Project personnel and families IRC DESBT	With metallurgical coal the Isaac LGA's key industry, mining employment levels by Year 19-20 of Project operations are assumed to be similar to current levels	A ramp-down in production in Years 19-20 would see the Project workforce reduce to approximately 260 people, and employment effectively ceasing in Year 21, with a small team remaining on site to manage rehabilitation and closure activities. This would result in redundancies, but the potential of unemployment would depend on other employment activities available at the time	- advice to Project personnel regarding planned closure date, three years prior to closure - support for employees to retrain if required.
Population, housing and accommodation				
Population changes during construction	IRC Moranbah and Dysart community members Moranbah and Dysart businesses Community and health services WAV providers	In 2023, the Isaac LGA is expected to have a non-residential population of 12,520 people	Assuming 90 per cent of the Project's total construction workforce would be drawn from outside the Isaac LGA, the Project would account for an increase of approximately 5.6 per cent on the projected number of non-resident workers at peak in 2024. The increase to the FTE population would be in the order of 1.9 per cent. Such short-term increases are common in the Isaac LGA and would not make a significant	- Workforce Code of Conduct - advice to IRC prior to commencement of construction on the workforce ramp-up and expected numbers of NRW - provision of WAV on the mining lease to meet accommodation, water, waste management and nutrition needs.

Area	Stakeholders	Baseline values	Impact/Benefit	Management measures
			difference to the NRW/resident population balance (a change of approximately 3.5 per cent)	
Construction workforce accommodation	IRC Moranbah and Dysart community members Health and emergency services WAV providers	The Isaac LGA has a good supply of workforce accommodation facilities, with approximately 19,052 existing WAV beds in 2021. Other mining projects with an approved EIS or working towards an EIS may commence in the same timeframe (see Section 4.6), so cumulative pressures on WAVs are possible	The Project Includes a proposed WAV for the construction phase to accommodate up to 1,000 people, avoiding any impact on the capacity or affordability of local housing	all non-local construction personnel required to utilise NRW accommodation provided or contracted by BMA.
Population changes during operation	IRC Moranbah and Dysart community members Moranbah and Dysart businesses Community and health services	In 2027 (when permanent Project-related population increases are assumed to peak and stabilise), the Isaac LGA is projected to have a residential population of 23,542 people and a NRW population of 11,980, people, for a FTE population of 35,522 people	Attracting 100 personnel and their families to the region would result in a population increase of approximately 260 people by Year 3, equivalent to 1.1 per cent of the Isaac LGA's estimated residential population in that year. The majority of population growth attributable would accrue in Dysart, potentially in the order of 200 people. Based on the Dysart's estimated population of 2,832 people in 2027, 200 new residents would represent an increase of 8.3 per cent. This would support community vitality, the sustainability of	- promotion of opportunities to live in the communities of Dysart and Moranbah - provision of BMA housing to encourage personnel to move to the Isaac LGA - investment in the liveability of Dysart and Moranbah through community partnerships and donations - provision of information on workforce ramp-up and expected population increases to enable IRC,

Area	Stakeholders	Baseline values	Impact/Benefit	Management measures
			social resources (such as volunteers), and local business confidence	services and businesses to plan.
	IRC Moranbah and Dysart community members Moranbah and Dysart businesses Community and health services		An increase of 180 NRW on shift by 2027 would represent an increase of 1.5 per cent on the projected NRW population and contribute to demand for services and infrastructure	use of existing WAVs which have spare capacity.
Local housing availability	IRC Moranbah and Dysart community members ELAM Isaac Affordable Housing Trust (IAHT)	Rental vacancy rates on Moranbah and Dysart currently indicate a tight to very tight rental market. BMA owns 522 dwellings in Dysart, of which 36 dwellings are vacant and ready for allocation, and 108 dwellings are under care and maintenance. A further 36 BMA properties are currently available or could be made available for occupancy available in Moranbah	As BMA would provide subsidised housing in Dysart for all personnel who would move to the LGA (and for personnel who already live in the LGA and would lose their current housing entitlement), this would avoid all but indirect housing impacts (resulting from increased business and service employment stimulated by the Project). BMA housing may also be available in Moranbah subject to needs of other BMA workers at mines in the Moranbah area	- provision of subsidised housing in Dysart for all personnel who would move to the LGA, including employees and contractors - provision of subsidised housing in Dysart for all personnel who already live in the LGA and require new housing arrangements - subject to availability, provision of subsidised housing in Moranbah if this is the employee's choice.
Accommodation for non-resident operational workers	IRC WAV providers	WAVs in the Isaac LGA have sufficient capacity to absorb significant increases in demand for NRW accommodation. Within WAVs owned or exclusively used by BMA, there	The operational workforce is assumed to include an estimated 300 NRW, of whom an estimated 180 personnel would be on shift and require accommodation at any one time.	contractual agreements with existing BMA-owned WAVs or other WAVs to accommodate non-

Area	Stakeholders	Baseline values	Impact/Benefit	Management measures
		is current spare capacity of 241 rooms. Other WAVs within the Isaac LGA have considerable additional capacity	There is sufficient capacity within BMA's WAVs to accommodate 180 personnel, and other WAVs in Dysart and/or Moranbah, with capacity could also be used. Project demand would be well within WAV capacity and are not expected to impact on local housing conditions	residential operational personnel.
Indirect demand for housing	IRC Moranbah and Dysart businesses Government agencies with resident staff (Queensland Health, Department of Education, QPS, QAS)	Due to a current lack of rental vacancies, businesses and services are having difficulty recruiting and retaining staff	The Project may indirectly result in increased demand for housing for business or services personnel	- invite business/business organisations and local services to seek the use of surplus BMA housing - consult with ELAM and IAHT to monitor any increased demands for affordable housing resulting from the Project, and undertake corrective action as needed.
Health and community wellbeing				
Social disruption	IRC Moranbah and Dysart residents and community organisations DCHDE, QPS, Queensland Health	High numbers of NRW in are experienced as a strain on roads, public venues and health services, and there are occasional concerns about safety in relation to NRW behaviour	At the peak of construction, the Project resulting in an increase of 5.6 per cent on the projected number of NRW. During operations, the expected increase in NRW is 1.5 per cent. Communities within the Isaac LGA have extensive experience in accommodating non-local workers. A temporary increase	- Workforce Code of Conduct - access to non-resident accommodation sufficient to meet the needs of all NRW.

Area	Stakeholders	Baseline values	Impact/Benefit	Management measures
			of 5.6 per cent and a permanent increase of 1.5 per cent is not expected to impact on local community or cultural values	
Disadvantage	IRC Moranbah and Dysart residents and community organisations DCHDE, QPS, Queensland Health	The Isaac LGA had a much higher median household income at \$2,420.00/week than the Queensland average of \$1,675.00/week in 2021, however SEIFA scores in 2016 were below the Queensland benchmark in Dysart	As the Project would provide housing for all personnel who wish to move to Dysart (and/or Moranbah as housing availability in Moranbah allows), impacts which would increase the potential for social disadvantage in potentially affected communities are not anticipated	provision of BMA housing to all personnel to avoid displacement of low-income households.
			Access to BMA training pathways, the availability of skilled employment in underground mining and mining employment incomes are likely to increase workers' personal development and access to resources that support wellbeing	- BMA training pathways including 10 apprenticeships to be offered by the Project - on-the job training.
Water access	IRC Moranbah and Dysart residents and businesses	BMA operates a water pipeline network in Central Queensland, servicing its mines, landholders and towns, and makes significant contributions to water supply in Moranbah and Dysart	Water supply for the Project will be provided via the existing water network supplying Saraji Mine. The existing EWPC Southern Extension Water Pipeline, which supplies water to the Lake Vermont Mine, has the potential to be impacted by subsidence associated with the	- BMA will continue to support water supply security in Moranbah and Dysart in accordance with its agreements with IRC - to the extent that the Project would result in additional personnel living locally, and therefore

Area	Stakeholders	Baseline values	Impact/Benefit	Management measures
			Project's underground mining operations	increase demand for town water supply, and if current town water supplies were insufficient to the increased quantum of demand, BMA would renegotiate its water supply agreement with IRC to enable provision of adequate town water to meet the increased demand Southern Extension Water Pipeline to be relocated to the transport and infrastructure corridor on the eastern edge of the Project Site.
Energy and communication	Moranbah and Dysart Smart Transformation Advisory Councils (STAC) GW2 IRC Moranbah and Dysart residents and businesses	Consultation participants have identified a lack of telecommunications capacity in Moranbah and Dysart as hampering business growth, and as a risk to vital communications during disasters and emergencies	No impacts on the capacity of energy or communication infrastructure were identified. BMA is supporting an increase in digital connectivity infrastructure in Moranbah and Dysart	with STAC leadership, a partnership has been developed between BMA, Telstra and GW3 to deliver a \$3.5 million upgrade to digital connectivity in Dysart and Moranbah.
Health services	IRC, Moranbah and Dysart residents and community organisations QAS, Queensland Health	The Moranbah and Dysart Hospitals experience large cumulative numbers of NRW as a strain on services.	There is potential for the Project to result in a temporary increase in the number of NRW seeking health services during construction	health facilities and service provision for all persons accommodated in the WAV

Area	Stakeholders	Baseline values	Impact/Benefit	Management measures
	Northern Queensland PHN	MDHHS and Northern Queensland PHN have responsibility for planning for health services including GP access		- advise Mackay HHS and Northern Queensland PHN on workforce ramp-up for construction - if the GP: population ratio indicates that there are shortages in the availability of GPs at the commencement of Project construction, BMA will work with stakeholders including community organisations, Queensland Health and IRC to identify and implement strategies that will attract and retain additional GPs to service local communities.
			A population increase of 1.2 per cent during operations (accounting for resident workers, family members and NRW) is not expected to make a significant difference on other residents' access to services or health service capacity, as both GP clinics and Mackay HHS account for population increases in their planning	- advise Mackay HHS and Northern Queensland PHN on workforce ramp-up for operation - health facilities and service provision for all persons accommodated in the WAV.
Police and emergency services	QPS, QFES, SES, QAS	Moranbah and Dysart emergency services noted in consultation in 2021 that their	NRW are likely to make regular low-level demands on police (e.g. for vehicle licensing issues)	liaise with the QPS, QFES, SES, QAS to advise of the timing of Project

Area	Stakeholders	Baseline values	Impact/Benefit	Management measures
		capacity is generally adequate to service their geographic region including the FTE population	and occasional demands on police, QAS and QFRS services for responses to traffic accidents and emergencies. Increased demands on police for the escort of oversize loads is also likely	construction and the anticipated workforce ramp-up for construction and operation - ensure local QPS, QAS and QFRS officers are oriented to the Project Site during construction and provided with on-site contacts for to manage site access and coordinated emergency responses. - need for demands police escort of oversize loads is managed by Queensland Police on a commercial basis while they are off shift.
Childcare	IRC Moranbah and Dysart residents Moranbah and Dysart childcare providers (long day care and OSHC)	Childcare places in Moranbah and Dysart are under-provided, predominantly due to a lack of skilled workers, and have insufficient flexibility to support workers with 12 hour shifts or over night shifts	Population increases as a result of the Project have potential to increase demand for childcare by approximately 12 places including 5 long day-care places for children 0-5 years and seven OSHC places for primary school-age children	- BMA is working with a range of stakeholders to initiate and implement the Childcare Leadership Alliance, which aims to deliver increases in childcare capacity and flexibility in Moranbah and Dysart. - If childcare capacity is insufficient to cater for the increased demands for childcare relating to the

Area	Stakeholders	Baseline values	Impact/Benefit	Management measures
				Project, BMA will facilitate recruitment of childcare workers to Dysart and Moranbah, by paying the costs for recruitment of childcare workers, including international recruitment if this is necessary, commensurate with the additional demands induced by Project personnel in Dysart and Moranbah. Support for recruitment will include relocation costs, as well as a wage subsidy for internationally recruited workers. Subject to need and the availability of BMA housing, BMA could also make housing available to childcare workers.
Schools	IRC Moranbah and Dysart residents Department of Education	Department of Education provides two primary schools in Moranbah and one in Dysart, as well as a high school in each community. Schools are currently being challenged by staff shortages	An estimated increase in demand for school enrolments of up to 44 enrolments could result from the Project's operation. Dysart schools are likely to receive the majority of demand for school enrolments (as the majority of BMA housing on offer is in Dysart). As the school has previously catered for higher numbers this is not	monitor the number of school-aged children coming to Moranbah and Dysart with new Project employees and provide advance notice of the number and age of children seeking enrolments to Education Queensland.

Area	Stakeholders	Baseline values	Impact/Benefit	Management measures
			expected to strain school capacity	
Council, community and recreational services	IRC Moranbah and Dysart residents Moranbah and Dysart community organisations	Moranbah has a wide range of cultural, community and recreational services. Dysart has a smaller range of services. Services such as disability services, housing support and mental health services are often under strain	In-migration of approximately 260 Project-related personnel and family members would be an increase of approximately 1.1 per cent on the forecast LGA population in Year 3, and result in an incremental increased demand for Council and community services	- BMA pays rates to IRC for all occupied and unoccupied dwellings owned by BMA, supporting provision of Council services - commitment to community investment, including prioritisation of identified community needs.
Air quality	IRC Moranbah and Dysart residents Queensland Health	Local residents particularly in Moranbah have experienced cumulative dust issues, detracting from their quality of life and amenity	An underground mine, the Project has minimal potential to contribute to an increase in dust. Where possible, existing surface infrastructure associated with the adjacent Saraji Mine will be utilised. Impacts on local air quality that are attributable to the Project were assessed as immaterial when compared to the air quality environment resulting from neighbouring open cut mining operations	nil required.
Road safety	IRC Moranbah and Dysart residents QPS	The cumulative traffic volumes of mining projects have led to ongoing road safety issues in the Isaac LGA, with particular concern about the Peak Downs Highway's poor safety record	The Project would include use of Lake Vermont Road which is unsealed. Traffic impact assessment identified the need for one new intersection to gain access to the Project and	upgrading the intersection of Dysart Road and Lake Vermont Road, as indicated by traffic impact assessment

Area	Stakeholders	Baseline values	Impact/Benefit	Management measures
			improved visibility at two key intersections	- provision of a new intersection on Dysart Road to gain access to the Project - lighting be installed at the Dysart Road / Lake Vermont Road and Dysart Road / Peak Downs Mine Road intersections to improve visibility.
Exposure to hazards or risks	IRC Moranbah and Dysart residents QPS, QFES, QAS Moranbah and Dysart community organisations and businesses	Mining industry activity has the potential for environmental and safety hazards	Residual high risks identified in the Project's hazard and risk assessment (EIS Chapter 20 Hazard and Risk) include traffic accidents, underground mine collapse, underground mine fire, high voltage electricity and natural hazards	- implementation of BHP Safety Our Requirements - risks and hazards will be regularly reviewed to ensure risks are as low as reasonably possible.
Local business and industry procurement				
Local and regional supply opportunities	Moranbah, Dysart and other Isaac LGA businesses Moranbah Traders Association IRC C-Res GW3 Mackay Chamber of Commerce	The Isaac LGA, Central Highlands and Mackay LGAs have well-established construction and mining services industries. As of December 2021, there were 209 businesses from the Isaac LGA registered for BMA's Local Buying Program	A wide range of consumables, goods and services will be sourced from towns within the Isaac LGA, Central Highland LGA and Mackay LGAs, using BMA's established supplier network and BM's Local Buy program. This is relevant to both construction and operational phases. The Project is likely to expend several million dollars per	- use of BMA's existing extensive supplier network - promotion of supply opportunities through C-Res and ICN - compliance with the Queensland Resources and Energy Sector Code of Practice for Local Content 2013

Area	Stakeholders	Baseline values	Impact/Benefit	Management measures
			annum with businesses in the Bowen Basin, of which up to 40 per cent could be spent with businesses in the Isaac LGA	BMA's C-Res Foundation capacity building programs.
Indigenous business opportunity	BBAC Barada Barna businesses Indigenous businesses in the Isaac, Mackay and Central Highlands LGA	BMA's Local Buying Program engages 48 registered Indigenous-owned businesses, primarily from across Mackay, Isaac and Central Highlands LGAs	Indigenous business will be an important part of the Project's supply chain. Up to 6.5 per cent of BMA opportunities let through C-Res are to Indigenous businesses	- share information on procurement opportunities, supplier qualification and performance requirements with BBAC, Aboriginal and Torres Strait Islander supplier networks, and through C-Res 6.5 per cent goal for the percentage of Project supply expenditure with Indigenous businesses - BMA's Local Buying Foundation includes a focus on capacity building with Indigenous businesses - potential partnership to support BBAC capacity for involvement in Project construction, operations and rehabilitation
Impacts on local businesses	Moranbah, Dysart and other Isaac LGA businesses Moranbah Traders Association IRC	Whilst the Bowen Basin region including Isaac LGA has significant labour and business supply strengths supporting the mining industry, Councils,	If skills and labour shortages persist into 2023 and beyond, there is potential for the Project to draw labour from local businesses and organisations,	BMA's Local Buying Foundation assists in developing the capacity of local businesses to service not just the Project but

Area	Stakeholders	Baseline values	Impact/Benefit	Management measures
	C-Res GW3 Mackay Chamber of Commerce	business and services, the region along with other Australian cities and regions is experiencing skills and labour shortages	and to exacerbate skills shortages and result in recruitment difficulties for other local businesses and industries	other businesses and local resident maintain a focus on workforce skills and development.
Project closure				
Employment	Project personnel and families IRC	The Project will have contributed to 500 operational jobs located in the Isaac LGA	Cessation of operations would result in redundancies	- advise to Project personnel three years ahead of expected cessation of production - support for Project personnel to re-train if required, ahead of redundancies.
Population and housing	IRC Local community members and organisations, local businesses, Queensland Government agencies providing social infrastructure	The Project is expected to maintain local employment for existing local residents and contribute up to 260 new residents in the Isaac LGA	Depending on the availability of other suitable local employment, cessation of operations could see some outflow of population. This may have consequences for the housing market, e.g. positive relief for renters if housing availability is limited, or negative impacts on housing values	advise to IRC and Moranbah and Dysart community members, three years ahead of expected cessation of production.
Social infrastructure	IRC Local community members and organisations, local businesses, Queensland Government agencies providing social infrastructure	The Project is expected to result in an incremental increase in demand for social infrastructure in the Isaac LGA	If population outflow was substantial (e.g.100 families leaving local towns) this may have consequences for social infrastructure, either positive in relieving demand, or negative if	advise to IRC, DTATSIPCA, DCSSDS, Queensland Health and Department of Education three years ahead of

Area	Stakeholders	Baseline values	Impact/Benefit	Management measures
			population thresholds no longer support service provision levels	expected cessation of production.
Businesses	Business in the Isaac, Mackay and Whitsunday LGAs	Businesses in the MIW region are expected to comprise an important part of the Project's supplier network, and would also benefit from personnel expenditures	Depending on the availability of other suitable supply opportunities, cessation of operations could see a loss of trade for some local businesses	advice to businesses through the C-Res network, three years ahead of expected cessation of production.

17.6 Social impact management plan

The SIA includes a 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 sub-plans for:

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

Each sub-plan articulates:

- the overall purpose of the sub-plan, including social impacts and opportunities to be addressed
- objectives and key performance indicators (KPIs)
- the measures designed to mitigate social impacts and enhance opportunities identified in the SIA
- an action plan, providing a practical basis for implementing each measure.

A monitoring framework 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 17-12 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 DSDILGP), SIA guideline risk assessment matrix. 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 17-13 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.

Positive impacts (benefits and opportunities) are shaded in blue.

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

Table 17-12 Significance assessment criteria

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

Table 17-13 Summary and significance

Impact/opportunity	Phase	Nature	Stakeholders	Significance	Mitigation/ Enhancement	Residual Risk/benefit
Community and stakeholders						
The Project would result in minimal additional surface impacts within the Project area. Barada Barna People would be restricted from accessing land within the Project whilst active mining or infrastructure use makes access unsafe. Post-mining land access may also be affected by freehold title	C/O	✖	BBAC and Barada Barna People	C2	- CHMP - Reconciliation Action Plan - cultural recognition strategies.	B1
Three nearby homesteads on the 'Saraji' property may experience occasional impacts to amenity as a result of noise or dust from the Project Site	O	✖	Owners and onsite personnel Saraji homesteads	B2	agreed coexistence agreements with the owners of these properties.	B1
The Project would support Moranbah and Dysart communities' identity as mining towns and their function as hometowns for local mining personnel. In Dysart, the Project would also strengthen confidence and optimism in the town's future.	O	✓	Dysart and Moranbah communities, IRC	D2	- recruitment hierarchy and strategy with a focus on Isaac LGA residents - investment in community projects and shared initiatives to strengthen town functions.	D3
The Project would make a long-term positive contribution to community cohesion through increased long term mining employment, indirect employment opportunities and population increases	O	✓	IRC Dysart, Moranbah and potentially Middlemount communities, community organisations	D1	BMA's social investment partnerships and programs.	D2
There is potential for non-resident workforce to change social conditions such as feelings of safety in local communities, however Moranbah and	C/O	✖	IRC Dysart and Moranbah communities	B2	- accommodation village provision for construction workers - BMA Workplace Conduct Policy	B1

Impact/opportunity	Phase	Nature	Stakeholders	Significance	Mitigation/ Enhancement	Residual Risk/benefit
Dysart show positive indicators of community safety, and QPS have advised that non-resident workers represent a small proportion of service demands			Community organisations		BMA's Community Development partnerships and programs.	
The Project would result in surface disturbance of approximately 1,155 ha during the Project's operations phase, but with only minimal disruptions to grazing within BMA land	O	x	Landholders with interest in post-mining land use IRC	D2	- rehabilitation in accordance with legislative requirements - post-mining land uses will include safety and suitability for pre-mining land uses such as grazing.	D1
Subsidence could occur above underground mining areas, with temporary impacts on use for grazing whilst the affected areas are returned to a stable landform	O	x	BMA, Barada Barna People, and potentially, future landholders post mining	B2	rehabilitation in accordance with BMAs completion criteria, EA and EIS approval conditions, and legislative requirements.	B1
Employment						
Construction would offer up to 500 jobs in Year 1 of construction and 1,000 jobs in Year 2, benefitting construction industry personnel from the local, regional and broader (Queensland) areas. An estimated 10 per cent of the total construction workforce is expected to be filled by Isaac LGA residents providing a local benefit	C	✓	Construction employees in the Isaac, Mackay and other LGAs Heavy and civil construction companies in the Isaac and Mackay LGAs	C1	- brief businesses in Moranbah, Dysart and Mackay about Project opportunities - provide advance notice of the construction schedule through BMA's Local Buying stakeholder register and ICN - ensure Indigenous businesses in the Isaac, CQ and MIW regions are identified and contacted as part of the tendering and sub-contracting process - businesses and industry engagement and procurement strategies.	C2

Impact/opportunity	Phase	Nature	Stakeholders	Significance	Mitigation/ Enhancement	Residual Risk/benefit
If mining construction activity is high when Project construction commences, there is potential to draw construction labour and trade skills from businesses and industries in Central Queensland that rely on construction skills and labour	C	×	IRC, Moranbah, Dysart and Mackay businesses (heavy industry, trades and construction, government and community agencies, business and residents)	B3	- recruitment using established supply chain of recruitment and labour hire companies in Mackay and Brisbane, and established relationships with mining construction companies - provision of a temporary construction WAV to support recruitment from other Queensland regions.	B2
At full development (potentially by 2027 (Year 5)), up to 500 operational personnel would be employed. Assuming no change in BMA's total production driving an increase in total job numbers during 2024-2025 (Year 2-3), the Project would represent an increase in job numbers (additionality) of approximately 2.9 per cent during 2025-2026 (Year 3-4), and approximately 5.8 per cent during the ensuing years. Recruitment will target existing local personnel and personnel who would move to the Isaac LGA to ensure that local community members benefit	O	✓	Existing mining workers and new recruits to mining, including young people Moranbah and Dysart State High Schools, Mackay TAFE, CQU BBAC Mackay and Rockhampton-based recruitment and employment support agencies	D2	- work with BMA's recruitment network and partners - recruitment hierarchy and strategy - Supporting settlement strategy - provision of housing for personnel who wish to move to Moranbah or Dysart.	D3
If labour conditions remain similar to current conditions, the Project may compete with other mining operations and potentially draw skills and labour from business in other industries for skilled personnel. The closure of one or two coal mines in the Isaac LGA (by around 2025) will release up to 1,100 skilled mining	O	×	IRC, Moranbah and Dysart businesses	B2	monitor announcements of mine closure in the Isaac LGA and MIW and Central Queensland regions, and target recruitment campaigns accordingly to enable Isaac LGA residents to continue working locally at the Project.	B1

Impact/opportunity	Phase	Nature	Stakeholders	Significance	Mitigation/ Enhancement	Residual Risk/benefit
personnel to the local market which would offset this					- BMA projects and partnerships focused on access to training and development in the mining and METS sectors - recruitment of people who are new to the mining industry.	
Increased long-term availability of mining employment in the Isaac LGA and contribution to employment diversification through increased underground mining opportunities. If production and therefore employment numbers at other BMA mining projects or other companies' mining operations decrease, the Project would have a negligible effect on employment numbers overall, but would contribute to maintaining employment continuity in the Isaac LGA	O	✓	Dysart, Moranbah and Middlemount workforce, communities and businesses IRC	C1	- local recruitment - training and development strategy.	C2
BMA's Indigenous participation goal of 8.0 per cent Indigenous employment target by 2025 will see an increase in employment opportunity for Indigenous people	O	✓	Indigenous mining industry workers, jobseekers and families Training organisations Indigenous businesses	C1	- adoption of 8.0 per cent goal for Indigenous employment in Project operations - access to BHP's Talent Acquisition team through schools and Native Title Registered Bodies - flexible work options including job-sharing and part-time roles - focus on Indigenous young people as part of each apprenticeship recruitment campaign.	C2
BMA's workforce diversity goal for a 40 per cent female workforce overall by 2025	O	✓	Employees and families	C1	enhance recruitment practices including employment messaging to	C2

Impact/opportunity	Phase	Nature	Stakeholders	Significance	Mitigation/ Enhancement	Residual Risk/benefit
will see an increase in employment opportunity for local and other women					target diverse audiences, workforce development and retention through coaching and support, and mentoring and support networks for women.	
There is potential for the Project to offer employment opportunities to people from within the Isaac LGA who have with disability	O	✓	HCC, MDSS, IRC, jobseekers	B1	- initiate engagement with HC, MDSS and other relevant providers to identify the employment aspirations of local people with disability - match any State Government funding provided to support employment skills development and pathways to employment for people with disability who live in Moranbah or Dysart.	C2
The Project is predicted to result in the equivalent of 299 indirect full-time jobs in the MIW SA4.	O	✓	Local businesses, jobseekers including Isaac LGA residents	C1	N/A.	C1
Local young people and people who are new to underground mining would benefit from training and development opportunities to equip them for employment in the Project and the mining industry generally. Approximately 10 apprenticeships and training opportunities available, with local young people the primary recruitment pool	O	✓	Young people in Isaac LGA communities Training providers including CTEC Dysart and Moranbah residents, communities and businesses	D1	- training and development strategies will include a focus on new entrants to mining and re-training of existing mining personnel for underground mining - The Project will offer ten apprenticeships by Year 3 of operations and maintain this commitment throughout the Project life.	D2
Population and housing						

Impact/opportunity	Phase	Nature	Stakeholders	Significance	Mitigation/ Enhancement	Residual Risk/benefit
Assuming 90 per cent of the Project's construction workforce would be NRW, the Project would account for an increase of approximately 5.6 per cent on the projected number of NRW at peak in 2024 (Year 2). This would not make a large difference to the NRW/resident population balance (a change of approximately 3.5 per cent)	C	✖	IRC Government and community agencies Dysart and Moranbah, communities	C2	- accommodation village provision, including onsite service provision - BMA Workplace Conduct Policy - BMA's Community Development partnerships and programs.	A1
Temporary accommodation would be required for an estimated 900 NRW. If not provided, there would be significant impacts on local housing availability and costs	C	✖	IRC and local residents Workforce accommodation providers	D3	- provision of accommodation village for construction phase on the mining lease - all non-local construction personnel required to utilise NRW accommodation provided or contracted by BMA.	B1
Attracting 100 personnel and their families to the Isaac LGA for Project employment would result in a population increase of approximately 260 people by 2027 (Year 5), equivalent to 1.1 per cent of the Isaac LGA's estimated residential population in that year (according to the assessment scenario). The majority of population growth attributable would accrue in Dysart, potentially in the order of 200 people, or an increase of 8.3 per cent. This would support community vitality, the sustainability of social resources (such as volunteers), and local business confidence	O	✓	IRC, Dysart, Moranbah and Middlemount workforce, communities and businesses	C2	- promotion of opportunities to live in Dysart and Moranbah - provision of BMA housing to encourage personnel to move to the LGA - investment in the liveability of Dysart and Moranbah through community partnerships and donations - provision of information on workforce ramp-up and expected population increases to enable IRC, services and businesses planning - engagement with IRC on shared value matters.	C3

Impact/opportunity	Phase	Nature	Stakeholders	Significance	Mitigation/ Enhancement	Residual Risk/benefit
The operational workforce is assumed to include an estimated 300 NRW, of whom an estimated 180 personnel would be on shift and require accommodation at any one time. If NRW were not accommodated, this could impact on the availability of rental housing and/or short-term accommodation. Project demand would be well within BMA's WAV capacity and is not expected to impact on local housing conditions	O	*	IRC, Dysart, Moranbah and Middlemount workforce, communities and businesses	B2	contractual agreements with existing BMA-owned accommodation villages or other accommodation villages sufficient to accommodate non-residential operational personnel.	B1
An increase of 180 NRW operational personnel on shift by 2027 (Year 5) would represent an increase of 1.5 per cent on the projected NRW population and contribute to demand for services and infrastructure (see below)	O	*	IRC Government and community agencies Dysart and Moranbah, communities	C1	- health facilities and service provision for personnel accommodated in the accommodation village - 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	C2	- accommodation village provision and requirement for contractors to stay in accommodation village if the rental market is tight i.e. less than 2.5 per cent vacancy rate - lease of surplus BMA housing to contractors.	B1
An estimated 130 dwellings could be required to house new local residents, primarily in Dysart and Moranbah. BMA would provide subsidised housing in Dysart for all personnel who would move to the LGA (and for personnel who already live in the LGA and would lose their current housing entitlement). BMA	O	*	IRC and local residents Government and community agencies Dysart and Moranbah communities	B3	- provision of subsidised housing in Dysart for all personnel who would move to the Isaac LGA - provision of subsidised housing in Dysart for all Project employees who live in the LGA and would lose current housing	B1

Impact/opportunity	Phase	Nature	Stakeholders	Significance	Mitigation/ Enhancement	Residual Risk/benefit
housing may also be available in Moranbah. This would avoid all but minor impacts on the housing market					- subject to availability, provision of subsidised housing in Moranbah if this is the employee's choice - provision of access to BMA housing for contractors if shortfall identified.	
Health and wellbeing						
At the peak of construction the Project could result in an increase of 5.6 per cent on the projected number of non-resident workers. During operations, the expected increase in NRW is 1.5 per cent. Increases of this scale are not expected to impact on local community or cultural values	C/O	*	IRC Government and community agencies Moranbah and Dysart Hospitals Dysart and Moranbah communities Queensland Health QPS, QAS and QFRS	B2	- workforce Code of Conduct - access to non-resident accommodation sufficient to meet the needs of all NRW - social investment in community participation programs.	B1
An estimated 900 non-local construction workers at peak 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 facilities and service provision for personnel in construction accommodation village - employee Assistance Program - advice to Mackay HHS and Northern Queensland PHN on workforce ramp-up for construction - if GP shortages are identified at the commencement of Project construction, work with stakeholders including community organisations,	D1

Impact/opportunity	Phase	Nature	Stakeholders	Significance	Mitigation/ Enhancement	Residual Risk/benefit
					Queensland Health and IRC to implement strategies that will increase GPs availability.	
Estimated population increases as the result of project operations could result in demand for GPs in the order of up to 0.5 GP, as well as increased demand for hospital and mental health services. A population increase of 1.2 per cent during operations (accounting for resident workers, family members and NRW) is not expected to make a significant difference on other residents' access to services or health service capacity, as Mackay HHS account for population increases in their planning	O	x	IRC Government and community agencies Moranbah and Dysart Hospitals Dysart and Moranbah communities Queensland Health	C2	- advise Mackay HHS and Northern Queensland PHN on workforce ramp-up for operation - engagement with IRC, Queensland Health, QPS, QAS and QFES to develop collaborative responses to any GP shortages.	C1
NRW are likely to make regular low-level demands on police (e.g. for vehicle licensing issues). There may be occasional demands on police, QAS and QFRS services for responses to traffic accidents and emergencies. Increased demands on police for the escort of oversize loads is likely	C/O	x	QPS, QAS, QAS, SES	C2	- liaise with the QPS, QFES, SES, QAS to advise of the timing of Project construction and anticipated workforce ramp-up for construction and operation - ensure local QPS, QAS and QFRS officers are oriented to the Project Site during construction, and provided with on-site contacts for site access and coordinated responses - need for police escort of oversize loads is managed by Queensland	B1

Impact/opportunity	Phase	Nature	Stakeholders	Significance	Mitigation/ Enhancement	Residual Risk/benefit
					Police on a commercial basis while they are off shift.	
New residents are likely to contribute to increased demand for childcare, in the order of five long day care places, and seven extra out of school hours care places. Increased family support services may also be required	O	x	Employees Childcare centres IRC DTATSIPCA MDSS and DCSG	C2	- identify employees' childcare needs as part of recruitment process and options for childcare - with STACs and a range of stakeholders, implement the Childcare Leadership Alliance aimed to deliver increases in childcare capacity in Moranbah and Dysart.	B1
An estimated increase in demand for up to 44 school enrolments could result from the Project's operation. Dysart schools are likely to receive the majority of demand (as the majority of BMA housing on offer is in Dysart). As the school has previously catered for higher numbers this is not expected to strain school capacity	O	x	Department of Education Moranbah, Dysart and Middlemount schools	C2	advice to Department of Education, and local schools, on workforce ramp-up, including the number and age of school-aged children coming to Moranbah and Dysart with new Project employees.	B1
Population increase will increase demand for settlement and community support services	O	x	IRC MDSS DGSG DTATSIPCA Moranbah, Dysart and Middlemount communities	D2	- BMA's Community Development partnerships and programs - agreement with DGSG to provide settlement program ahead of operations commencing, as part of existing arrangements between BMA and DCSG or new Project-specific arrangements.	D1

Impact/opportunity	Phase	Nature	Stakeholders	Significance	Mitigation/ Enhancement	Residual Risk/benefit
In-migration of approximately 260 Project-related personnel and family members could see an increase of approximately 1.2 per cent on the forecast LGA population in 2027 (Year 5), and result in an incremental increased demand for Council, recreational, cultural services and community services	O	×	IRC DTATSIPCADCSSDS MDSS DGSG Government and community agencies Moranbah, Dysart and Middlemount communities Community, recreational and cultural organisations	D2	- BMA will continue to pay rates to IRC for all occupied and unoccupied dwellings owned by BMA to support Council service provision - BMA will continue to maintain its community investment, with consideration to employment and production levels. Where there is a material additionality of activities (i.e. additional employees or production) occur, BMA will reflect this through increases in community contributions - BMA's community investment focus on support for local community organisations.	D1
Access to BMA training pathways, the availability of skilled employment in underground mining and mining employment incomes are likely to increase workers' personal development and access to resources that support wellbeing	O	✓	Project personnel and families	D1	- local and regional recruitment hierarchy - BMA training pathways including 10 apprenticeships to be offered by the Project - on-the job training.	D2
The Project would include use of Lake Vermont Road that is unsealed. Traffic impact assessment identified the need for one new intersection with Dysart Road to	C	×	IRC Project personnel and families, motorists and	B4	provision of a new/upgraded intersection on Dysart Road to gain access to the Project	A2

Impact/opportunity	Phase	Nature	Stakeholders	Significance	Mitigation/ Enhancement	Residual Risk/benefit
gain access to the Project and improved visibility at two key intersections, to support traffic safety			community members in Moranbah and Dysart QFES QPS QAS		lighting installed at the Dysart Road / Lake Vermont Road and Dysart Road / Peak Downs Mine Road intersections.	
If the Project results in an increase in the Isaac LGA's population (estimated at 260 people), a commensurate increase in demand for town water supply would result. This would primarily be experienced in Dysart, with impacts in Moranbah likely to be minimal	O	×	IRC Community members and businesses in Dysart and potentially Moranbah	C2	- BMA will continue to support water supply security in Moranbah and Dysart in accordance with its agreements with IRC - if town water supplies were insufficient to the increased quantum of demand in Dysart, BMA would renegotiate its water supply agreement with IRC to enable provision of adequate town water to meet the increased demand.	C1
The Project will support community development in the Isaac LGA and social sustainability in Dysart, through population growth/stability, continued community investments, ongoing local employment opportunities, and contributions to the maintenance and enhancement of community infrastructure	O	✓	IRC Community members and businesses in Dysart and Moranbah	C2	- local and regional recruitment hierarchy - BMA training pathways - provision of subsidised housing for personnel - increased community funding if Project results in increased BMA employment overall.	C3
Local business and industry						

Impact/opportunity	Phase	Nature	Stakeholders	Significance	Mitigation/ Enhancement	Residual Risk/benefit
A wide range of consumables, goods and services will be sourced from towns within the Isaac LGA, Central Highland LGA and Mackay LGAs, using BMA's established supplier network and BMA's Local Buy program. This is relevant to both construction and operational phases. The Project is likely to expend several million dollars per annum with businesses in the Bowen Basin, of which up to 40 per cent could be spent with businesses in the Isaac LGA. Flow-on economic benefits are discussed in EIS Appendix M	C/O	✓	Businesses in Isaac, Central Highlands and Mackay LGAs Isaac Business Chamber	C2	• use of BMA's existing extensive supplier network • promotion of supply opportunities through C-Res and ICN • compliance with the Queensland Resources and Energy Sector Code of Practice for Local Content 2013 • BMA's Local Buying Foundation capacity building programs.	C3
Indigenous business will an important part of the Project's supply chain. Up to 6.5 per cent of BMA opportunities let through C-Res are to Indigenous businesses	O	✓	Businesses in Isaac, Central Highlands and Mackay LGAs	D1	• share information on procurement opportunities, supplier qualification and performance requirements with BBAC, Aboriginal and Torres Strait Islander supplier networks, and through C-Res • 6.5 per cent goal for the percentage of Project supply expenditure with Indigenous businesses • BMA's Local Buying Foundation includes a focus on capacity building with Indigenous businesses • potential partnership to support BBAC capacity for involvement in Project construction, operations and rehabilitation.	D2

Impact/opportunity	Phase	Nature	Stakeholders	Significance	Mitigation/ Enhancement	Residual Risk/benefit
If skills and labour shortages persist into 2023 and beyond, there is potential for the Project to draw labour from local businesses and organisations, and to exacerbate skills shortages and result in recruitment difficulties for other local businesses and industries	O	×	IRC Businesses in Isaac, Central Highlands and Mackay LGAs Isaac Business Chamber	C2	- C-Res business capacity building program - training and development programs - BMA's Local Buying Foundation assists in developing the capacity of local businesses to service not just the Project but other businesses and local resident - maintain focus on workforce skills and development.	B1
Cumulative impacts						
There may be a period of overlap when the cumulative demands of three or four mining projects for construction labour coincide, with potential to contribute to labour shortages impacting on local business and industries' capacity to attract and retain skills and labour	C	×	Local and regional businesses relying on heavy and civil construction personnel Isaac Business Chamber IRC	B2	business capacity building programs through C-Res Foundation.	B1

Impact/opportunity	Phase	Nature	Stakeholders	Significance	Mitigation/ Enhancement	Residual Risk/benefit
Health services including the Moranbah Hospital, Dysart Hospital and local GPs are likely to see an increase in demand e.g., with a cumulative non-local construction workforce of 1,200 personnel in the Isaac LGA, increased demands for doctors' appointments could result	C	x	IRC Moranbah and Dysart communities Queensland Health Queensland Police, QAS and QFRS	B2	- contract with a local GP clinic to provide workplace health services and access to a GP for personnel staying in the WAV - paramedical or nursing staff on site - advice to IRC, Queensland Government agencies and local health service providers regarding workforce ramp up, site arrangements and location - support for IRC advocacy for Government resources for service provision to match total FTE population.	B1
Continuity of employment for local and regional construction contractors between Olive Downs Project and SEMLP is possible and would be beneficial for construction industry workers and local suppliers	C	✓	Construction industry workers and businesses	B2	N/A.	B2

Impact/opportunity	Phase	Nature	Stakeholders	Significance	Mitigation/ Enhancement	Residual Risk/benefit
The Isaac LGA's continued growth is anticipated in IRC planning, but cumulative impacts may result in significant strains on local housing stocks and infrastructure in the short to medium term. BMA's commitment to make housing available to BMA employees is expected to substantially mitigate the Project's contribution to cumulative housing demand	C/O	×	IRC ELAM IAHT Moranbah and Dysart communities DHLGPPW	C2	provision of housing and accommodation for BMA personnel.	B1
Increased demands on Council infrastructure, community services and health and emergency infrastructure are likely if multiple new coal mining operations commence operation in the Isaac LGA. Significant demands on local housing stocks are possible, with potential for displacement of local residents and key workers	O	×	IRC MDSS DGSG DHLGPPW	B3	- existing BMA-IRC Existing agreements - ongoing provision of water supply to communities in IRC area as per current agreements, - road use and maintenance - waste management to consider transporting waste outside LGA if IRC indicates a lack of available capacity. - advice to IRC, Queensland Government agencies and local health service providers regarding workforce ramp up, site arrangements and location	B2

Impact/opportunity	Phase	Nature	Stakeholders	Significance	Mitigation/ Enhancement	Residual Risk/benefit
					development of protocols with Queensland Police, QAS and QFRS.	
The commencement of operation of the Project, Olive Downs and Winchester South would collectively contribute to approximately 1,910 operational positions based in the Isaac LGA. This would be a significant benefit for Isaac LGA residents. Assuming sufficient housing, services and infrastructure are provided, the cumulative benefits of the Projects considered could support Isaac LGA's economic and social sustainability for the next 20 years	O	✓	IRC MDSS DGSG DHLGPPW DTATSIPCA, DCSSDS	B3	N/A.	B3

Impact/opportunity	Phase	Nature	Stakeholders	Significance	Mitigation/ Enhancement	Residual Risk/benefit
The cumulative construction and operational workforces would result in increased demands for retail, hospitality, fuel and occasional meals at venue, in both Dysart and Moranbah, which would be experienced as a positive impact for local businesses	C/O	✓	Local businesses, Moranbah Traders	B3	N/A.	B3
Closure impacts						
Cessation of operations would result in redundancies, with potential for disadvantage for workers if alternative employment is not available	Closure	✗	Project personnel IRC Moranbah and Dysart communities	C3	- advice to Project personnel three years ahead of expected cessation of production - support for Project personnel to re-train if required, ahead of redundancies	B2

Impact/opportunity	Phase	Nature	Stakeholders	Significance	Mitigation/ Enhancement	Residual Risk/benefit
Depending on the availability of other suitable local employment, cessation of operations could see some outflow of population. This may have consequences for the housing market, e.g. positive relief for renters if housing availability is limited, or negative impacts on housing values	Closure	Unknown	IRC Moranbah and Dysart communities, local businesses, Moranbah Traders	B3	advice to IRC and Moranbah and Dysart community members, three years ahead of expected cessation of production	B2
If population outflow was substantial (e.g. 100 families leaving local towns) this may have consequences for social infrastructure, either positive in relieving demand, or negative if population thresholds no longer support service provision levels. Depending on the availability of other suitable supply opportunities, cessation of operations could see a loss of trade for some local businesses	Closure	Unknown	IRC Moranbah and Dysart communities, local businesses, Moranbah Traders	B2	- advice to IRC, DCHDE, Queensland Health and Department of Education three years ahead of expected cessation of production - advice to businesses through the C-Res network, three years ahead of expected cessation of production	B1

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, Middlesbrough 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 FY2024 (Year 2), with an estimated 10 percent expected to be filled by Isaac LGA residents
- at full development (potentially by FY2027 (Year 5)), up to 500 operational jobs would be available with recruitment targeting existing local personnel and personnel who would move to the Isaac LGA
- 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
- workforce diversity and inclusion, including Indigenous workers and women, and potential for employment opportunities people with disability
- 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
- Project closure would result in redundancies, with potential for disadvantage to Project workers, mitigated through advance notice and support for retraining
- likelihood of indirect employment benefits within Isaac LGA

Population and housing

- during peak operations, a resident population increase in the Isaac LGA in the order of 260 people is estimated, supporting planned population growth
- the Project may result in total population increases (resident plus non-residents) of approximately 1.1 per cent in 2027 (Year 5), 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 450 non-local personnel on shift at construction peak may translate to demand for approximately 0.1 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, emergency 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 260 additional residents, approximately 32 Prep to Year 10 enrolments and up to seven Year 11-12 enrolments may result in the Isaac LGA
- population increases will increase demand for Council, recreational, cultural and community services, mitigated by ongoing community investment and additional investment commensurate with additional BMA employees
- 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
- traffic safety risk on Lake Vermont Road would increase, but new intersection construction would mitigate risk
- access to BMA training pathways, the availability of skilled employment in underground mining and mining employment incomes are likely to increase workers' personal development and access to resources that support wellbeing
- support for community development in the Isaac LGA and for social sustainability in Dysart, through support for population growth/stability, community cohesion, continued community investments, ongoing local employment opportunities, and contributions to the maintenance and enhancement of community infrastructure
- cumulative increased demands on social infrastructure and housing if multiple new coal mining operations commence operation, mitigated by BMA's provision of housing, training, community investment and engagement with local businesses.

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, mitigated by drawing from local, regional and broader labour forces
- potential for continuity of employment for local and regional construction contractors.

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, CDMF and Local Buying program which will ensure that local communities benefit from the Project's construction and operations. A focus on local employment, provision of local subsidised housing and community investment are likely to increase Dysart's population and support community vitality. It is likely that the Project would have net positive benefits for community wellbeing and social and economic sustainability in the Isaac LGA.

IRC and communities in the Isaac LGA are experienced in managing mining projects and the changes they bring to communities. They are also strongly supportive of the development and continuation of coal mining projects in the region.

Unanticipated impacts will be managed by BMA through the Project's SIMP review process via the comprehensive monitoring framework.